



CIGARETTE INFORMATION REPORT

PHILIP MORRIS USA RESEARCH AND DEVELOPMENT



JANUARY 1990

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PREPARED BY:

Susan W. Laffoon
Susan W. Laffoon

Barbara S. Maiz
Barbara S. Maiz

APPROVED BY:

J. E. Wickham
J. E. Wickham

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ALPHABETICAL INDEX OF BRANDS

BRAND	SIZE	PAGE NO.	COMPANY**	BRAND	SIZE	PAGE NO.	COMPANY**
Alpine	K-FM	52	PM	English Ovals (Box)	K-MF	64	PM
Alpine Lights	K-FM	51	PM	Eve Slim Lights (Box)	100	62	LG
Alpine Lights	100M	58	PM	Eve Slim Lts. Men. (Box)	100M	64	LG
Alpine	100M	59	PM	Eve Lights (Box)	120	62	LG
American Filters	K-F	49	A	Eve Lights Men. (Box)	120M	64	LG
American Filters	100	56	A	Hi-Lite (Box)	100	62	PM
American Lights	K-F	48	A	H. Tarayton	K-MF	64	A
American Lights	100	55	A	Kent (Box)	L-F	44	LO
Barclay	K-F	9	BW	Kent	K-F	13	LO
Barclay (Box)	L-F	62	BW	Kent III	K-F	8	LO
Barclay	100	24	BW	Kent	100	28	LO
Belaire	K-FM	20	BW	Kent Men.	100M	64	LO
Belaire	100M	14	BW	Kent III	100	23	LO
Benson & Hedges (Box)	K-F	62	PM	Kent III (Box)	100	62	LO
Benson & Hedges	100	30	PM	Kent Golden Lts. (Box)	L-F	62	LO
Benson & Hedges Men.	100M	38	PM	Kent Golden Lts.	K-F	19	LO
Benson & Hedges (Box)	100	62	PM	Kent Golden Lts. Men.	K-FM	18	LO
Benson & Hedges Men. (Box)	100M	64	PM	Kent Golden Lts.	100	23	LO
Benson & Hedges Lights	100	28	PM	Kent Golden Lts. Men.	100M	35	LO
Benson & Hedges Lights Men.	100M	36	PM	Kent Golden Lts. (Box)	100	62	LO
Benson & Hedges Lights (Box)	100	27	PM	Keel	R-MFM	64	BW
Benson & Hedges Lts. Men. (Box)	100M	36	PM	Keel (Box)	L-FM	64	BW
B & H Deluxe U.L. (Box)	100	24	PM	Keel	K-FM	21	BW
B & H Deluxe U.L. Men. (Box)	100M	33	PM	Keel Lights	K-FM	18	BW
B & H Multifilter	K-FC	42	PM	Keel Milds	K-FM	20	BW
Cambridge Full Flavor	KF	50	PM	Keel Milds (Box)	L-FM	20	BW
Cambridge Full Flavor	100	57	PM	Keel Ultra	K-FM	17	BW
Cambridge Ultra Lights	100	53	PM	Keel	100M	38	BW
Cambridge Lights	K-F	48	PM	Keel Lights	100M	34	BW
Cambridge Lights Men.	K-FM	51	PM	Keel Milds	100M	64	BW
Cambridge Lights	100	55	PM	Keel Ultra	100M	33	BW
Cambridge Lights Men.	100M	58	PM	Lark	K-FC	62	LG
Camel (Box)	L-F	62	R	Lark	100C	62	LG
Camel	K-MF	45	R	Lark Lights	K-FC	42	LG
Camel	K-F	14	R	Lark Lights	100C	43	LG
Camel Lights (Box)	L-F	44	R	L & M (Box)	L-F	62	LG
Camel Lights	K-F	12	R	L & M	K-F	13	LG
Camel Lights	100	26	R	L & M	100	29	LG
Capri (Box)	100	40	BW	Lucky Strike	R-MF	48	A
Capri Men. (Box)	100M	41	BW	Lucky Strike	K-F	13	A
Ultra Carlton (Box)	K-F	62	A	Lucky Strike (Box)	K-F	62	A
Carlton	K-F	8	A	Lucky Strike Lights	K-F	62	A
Carlton Men.	K-FM	16	A	Lucky Strike	100	62	A
Carlton	100	22	A	Lucky Strike Men.	100M	64	A
Carlton (Box)	100	22	A	Lucky Strike Lights	100	62	A
Carlton Men.	100M	64	A	Magna (Box)	L-F	48	R
Carlton Men. (Box)	100M	64	A	Magna	K-F	48	R
Carlton	120	31	A	Magna Lites (Box)	L-F	46	R
Carlton Men.	120M	39	A	Magna Lites	K-F	47	R
Century 25's	K-F	49	R	Malibu	K-F	49	A
Century Lights 25's	K-F	46	R	Malibu	KFM	52	A
Century 25's	100	57	R	Malibu	100	56	A
Century Lights 25's	100	54	R	Malibu Low Tar Men.	100M	59	A
Chesterfield	R-MF	64	LG	Malibu Lights	K-F	46	A
Chesterfield King	K-MF	45	LG	Malibu Lights	100	54	A
Chesterfield Lights	K-F	47	LG	Malibu Ultra Lights	100	53	A
Chesterfield Lights	100	54	LG	Marlboro (Box)	L-F	44	PM
Commander King Size	K-MF	45	PM	Marlboro	K-F	15	PM
Commander Regular	K-MF	45	PM	Marlboro 25's	K-F	15	PM
Doral Full Flavor (Box)	L-F	48	R	Marlboro Lights	K-F	12	PM
Doral Full Flavor	K-F	49	R	Marlboro Lights 25's	K-F	11	PM
Doral Full Flavor Men.	KFM	82	R	Marlboro Lights (Box)	K-F	11	PM
Doral Full Flavor	100	86	R	Marlboro Lights	100	28	PM
Doral Full Flavor Menthol	100M	89	R	Marlboro Lights (Box)	100	27	PM
Doral Lights	K-F	46	R	Marlboro Lts. Men. (Box)	K-FM	19	PM
Doral Lights Men.	K-FM	51	R	Marlboro Lts. Men. (Box)	100M	36	PM
Doral Lights	100	54	R	Marlboro Men.	K-FM	21	PM
Doral Lights Men.	100M	58	R	Marlboro	100	30	PM
Doral Ultra Lights	K-F	46	R	Marlboro (Box)	100	62	PM
Doral Ultra Lights	100	53	R	Max	120	62	LO
				Max Men.	120M	64	LO

*Location of complete analytical data in report.

**Key: A = American; BW = Brown & Williamson; LG = Liggett Group; LO = Lorillard
PM = Philip Morris; R = Reynolds

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PH - Phillip Morris/ R - Reynolds

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C.I. HIGHLIGHTSJANUARY, 1990NEW BRANDSPHILIP MORRISBRISTOL LIGHTS 85 & 100 (PLAIN & MENTHOL)

Philip Morris has introduced Bristol Lights 85 and 100 (plain and menthol) cigarettes into limited national distribution. These cigarettes will be sold in 42 areas where the subgeneric market for cigarettes appears to be developing. The 85 mm cigarettes deliver 11 mg tar and 0.8 mg nicotine; the 100 mm cigarettes deliver 12 mg tar and 0.9 mg nicotine. The smoke menthol delivery is 0.6 mg.

PHILIP MORRISBUCKS FULL FLAVOR 85BUCKS LIGHTS 85

Philip Morris is test marketing Bucks Full Flavor 85 and Bucks Lights 85 cigarettes in Phoenix, Arizona and Birmingham, Alabama. These cigarettes are targeted to compete against Camel cigarettes. The Bucks 85 cigarette delivers 14 mg tar and 1 mg nicotine; the Bucks Lights 85 cigarette delivers 10 mg tar and 0.7 mg nicotine.

R. J. REYNOLDSUPTOWN 80 MENTHOL (BOX)UPTOWN 85 MENTHOL (82)

R. J. Reynolds introduced but then withdrew Uptown 80 Menthol (Box) and Uptown 85 Menthol (Soft Pack) cigarettes from the Philadelphia test market. These cigarettes are packaged in a black and gold pack. The cigarettes are intentionally packaged with the filter-end toward the bottom of the pack. This supposedly enables the smoker to put the cigarette in his mouth without touching the filter. These cigarettes deliver 17 mg tar, 1.2 mg nicotine and 0.55 mg smoke menthol.

BRAND MODIFICATIONSR. J. REYNOLDSDORAL LIGHTS MENTHOL 85 & 100

The level of expanded tobacco has decreased (25 to 20%) in both Doral Lights Menthol 85 and 100 cigarettes resulting in increased tobacco weights and rod densities. In May, 1988, the level of expanded tobacco was decreased from 32 to 25%.

R. J. REYNOLDSTOBACCO WEIGHT REDUCTIONS

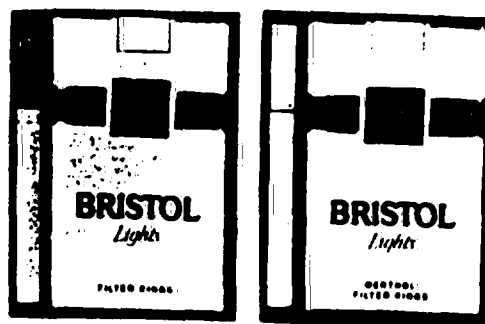
Thirteen additional brands have shown a tobacco weight reduction (2 to 8%) since July, 1989. Previously, tobacco weights had been lowered on twenty-one brands. Reynolds has decreased tobacco weight on a total of 34 brands.

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NEW BRANDSPHILIP MORRIS
BRISTOL LIGHTS 85 (PLAIN & MENTHOL)

Philip Morris has introduced Bristol Lights 85 (plain and menthol) cigarettes into limited national distribution. The smoke deliveries of these brands are lower than the Pyramid cigarettes.



	<u>Bristol Lights 85</u>	<u>Pyramid Lights 85</u>	<u>Bristol Lights Menthol 85</u>
<u>Smoke</u>			
Butt Length, mm	35	33	35
FTC Tar, mg/cigt.	10.9	14.0	11.4
Nicotine, mg/cigt.	0.82	1.07	0.87
Puffs/cigt.	7.8	7.8	7.7
Filtration Eff., %	55	48	51
Filler Rod TPM, mg/cigt.	32.9	28.8	35.5
CO, mg/cigt.	12.4	12.8	12.1
<u>CIGARETTE</u>			
Total RTD, mm of H ₂ O	119	117	111
Static Burn. Time, min.	7.9	7.9	8.1
Length, mm	84.0	83.8	84.1
Circumference, mm	24.9	24.7	24.9
<u>PAPER</u>			
<u>Components</u>			
Type	Cit.	Cit.	Cit.
Percent	0.7	0.5	0.6
Permeability, ml/cm ² x min.	20	143*	18
<u>FILTER</u>			
Type	CA	CA	CA
RTD, mm of H ₂ O	104	65	97
Length, mm	26.9	24.8	27.1
Weight, g	0.17	0.14	0.17
Fiber denier/shape	3.2/Y	4.4/Y	3.2/Y
Tipping paper length, mm/Color	32/Cork	30/Cork	32/White
Ventilation, %	19	None	22
Type/Rows	L/2	-	L/2
<u>FILLER</u>			
Total alkaloids, % (DWB)	2.32	2.10	2.39
Total red. sugars, % (DWB)	7.2	8.4	6.6
Wt. of tob., g (12.5% O.V.)	0.614	0.629	0.611
Rod Density, g/cc	0.219	0.220	0.218
Reconstituted Tob., %	15	15	15
Expanded Stems, %	15	5	15
Expanded Tob., %	None	23	None
<u>MENTHOL, mg/cigt.</u>			
Smoke	-	-	0.63
Filler	-	-	2.4
Filter	-	-	1.2

*Perforated

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PHILIP MORRIS
BRISTOL LIGHTS 100 (PLAIN & MENTHOL)

Philip Morris has introduced Bristol Lights Menthol 85 and 100 cigarettes into limited national distribution. The tar and nicotine deliveries for these cigarettes are lower than the Pyramid cigarettes.



	Bristol Lights 100	Pyramid Lights 100	Bristol Lights Menthol 100	Pyramid Lights Menthol 100
SMOKE				
Butt Length, mm	39	38	39	38
FTC Tar, mg/cigt.	12.0	13.4	12.5	14.1
Nicotine, mg/cigt.	0.94	1.04	0.93	1.07
Puffs/cigt.	10.2	8.3	10.0	8.3
Filtration Eff., %	54	52	54	50
Filler Rod TPM, mg/cigt.	34.7	28.3	35.9	28.1
CO, mg/cigt.	12.5	14.4	14.0	14.2
CIGARETTE				
Total RTD, mm of H ₂ O	115	131	123	125
Static Burn. Time, min.	8.1	7.3	7.8	6.7
Length, mm	99.6	98.6	99.7	98.1
Circumference, mm	24.7	24.8	24.9	24.7
PAPER				
Components				
Type	Cit.	Cit.	Cit.	Cit.
Percent	0.6	0.9	0.7	2.0
Permeability, ml/cm ² x min.	21	77*	19	124*
FILTER				
Type	CA	CA	CA	CA
RTD, mm of H ₂ O	100	65	111	69
Length, mm	31.4	29.9	31.4	29.6
Weight, g	0.19	0.17	0.19	0.17
Fiber denier/shape	3.2/Y	4.4/Y	3.2/Y	4.4/Y
Tipping paper length, mm	36	35	36	35
Color	Cork	Cork	White	White
Ventilation, %	30	None	28	None
Type/Rows	L/2	-	L/2	-
FILLER				
Total alkaloids, % (DWB)	2.38	2.17	2.34	2.05
Total red. sugars, % (DWB)	7.5	8.7	6.4	8.5
Wt. of tob., g (12.5% O.V.)	0.774	0.733	0.766	0.724
Red Density, g/cc	0.234	0.219	0.228	0.218
Reconstituted Tob., %	15	15	15	15
E.S., %	15	5	15	5
Expanded Tob., %	None	23	None	23
MENTHOL, MG/CIGT.				
Smoke	-	-	0.64	0.42
Filler	-	-	3.3	2.0
Filter	-	-	1.2	1.1

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PHILIP MORRIS
BUCKS FULL FLAVOR 85
BUCKS LIGHTS 85

Philip Morris is test marketing Bucks Full Flavor 85 and Bucks Lights 85 cigarettes in Phoenix, Arizona and Birmingham, Alabama. These cigarettes are targeted to compete against Camel and Camel Lights cigarettes.



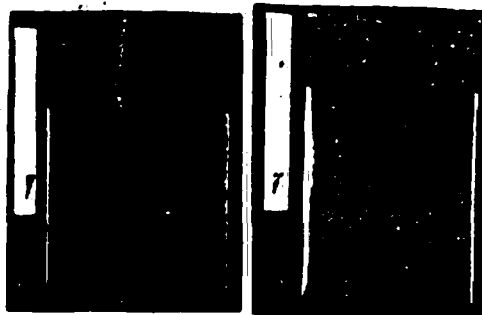
	Bucks Full Flavor 85	Camel 85	Bucks Lights 85	Camel Lights 85
SMOKE				
Butt Length, mm	28	28	34	34
FTC Tar, mg/cigt.	14.4	14.2	10.3	10.9
Nicotine, mg/cigt.	0.98	0.94	0.73	0.76
Puffs/cigt.	8.4	8.1	7.6	7.2
Filtration Eff., %	46	46	56	60
Filler Rod TPM, mg/cigt.	31.2	28.1	28.0	29.3
CO, mg/cigt.	12.9	13.1	11.3	10.4
CIGARETTE				
Total RTD, mm of H ₂ O	108	106	120	114
Static Burn. Time, min.	7.7	7.0	7.7	7.7
Length, mm	84.2	83.9	84.6	84.1
Circumference, mm	25.0	25.0	24.9	25.0
PAPER				
Components				
Type	Cit.	Cit.	Cit.	Cit.
Percent	0.9	0.9	0.8	0.8
Permeability, ml/cm ² x min.	31	39	31	30
FILTER				
Type	CA	CA	CA	CA
RTD, mm of H ₂ O	74	68	103	83
Length, mm	20.9	21.1	26.9	27.0
Weight, g	0.13	0.13	0.17	0.18
Fiber denier/shape	3.2/Y	3.0/Y	3.2/Y	2.4/Y
Tipping paper length, mm/Color	25/Cork	25/Cork	31/Cork	31/Cork
Ventilation, %	9	12	16	15
Type/Rows of Holes	L/1	ESP	L/1	L/2
FILLER				
Total alkaloids, % (DWB)	2.12	1.84	2.08	1.86
Total red. sugars, % (DWB)	7.7	6.6	8.1	6.9
Wt. of tob., g (12.5% O.V.)	0.704	0.710	0.638	0.638
Rod Density, g/cc	0.224	0.226	0.228	0.224
Reconstituted Tob., %	22	24	22	24
S.S., %	7	None	7	None
Expanded Tob., %	14	16	14	16

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R. J. REYNOLDS
UPTOWN 80 MENTHOL (BOX)
UPTOWN 85 MENTHOL (SP)

R. J. Reynolds introduced but then withdrew Uptown 80 Menthol (Box) and Uptown 85 Menthol (SP) cigarettes from the Philadelphia test market.



	<u>Uptown Menthol</u> <u>80 (Box)</u>	<u>Uptown Menthol</u> <u>85 (SP)</u>	<u>Marlboro</u> <u>Menthol 85</u>
SMOKE			
Butt Length, mm	26	28	28
FTC Tar, mg/cigt.	17.1	17.5	15.5
Nicotine, mg/cigt.	1.22	1.21	1.08
Puffs/cigt.	8.7	8.7	8.4
Filtration Eff., %	42	45	43
Filler Rod TPM, mg/cigt.	32.0	31.2	26.5
CO, mg/cigt.	16.2	16.9	13.4
CIGARETTE			
Total RTD, mm of H ₂ O	139	136	113
Static Burn. Time, min.	8.6	8.5	7.4
Length, mm	78.8	83.9	83.6
Circumference, mm	24.7	24.9	24.9
PAPER			
Permeability, ml/cm ² x min.	24	23	47
FILTER			
Type	CA	CA	CA
RTD, mm of H ₂ O	61	68	63
Length, mm	18.9	20.8	21.0
Weight, g	0.11	0.12	0.12
Fiber denier/shape	3.6/Y	3.6/Y	4.1/Y
Tipping paper length, mm/Color	23/Cork	25/Cork	25/Cork
Ventilation, %	None	None	None
FILLER			
Total alkaloids, % (DWB)	2.35	2.23	2.14
Total red. sugars, % (DWB)	6.8	8.1	8.4
Wt. of tob., g (12.5% O.V.)	0.724	0.741	0.726
Red Density, g/cc	0.249	0.239	0.235
Reconstituted Tob., %	24	24	22
S.S., %	None	None	None
Expanded Tob., %	16	16	15
MENTHOL, MG/CIG.			
Smoke	0.57	0.53	0.56
Filler	1.9	2.0	2.0
Filter	0.5	0.5	1.2

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BRAND MODIFICATIONSB. J. REYNOLDSDORAL LIGHTS MENTHOL 85 & 100

The level of expanded tobacco has decreased in both Doral Lights Menthol 85 and 100 cigarettes resulting in increased tobacco weights and rod densities.

	<u>Doral Lights</u> <u>Menthol 85</u>		<u>Doral Lights</u> <u>Menthol 100</u>	
	<u>Previous</u>	<u>Present</u>	<u>Previous</u>	<u>Present</u>
Smoke				
Butt Length, mm	34	34	38	38
FTC Tar, mg/cigt.	9.7	9.5	9.6	9.3
Nicotine, mg/cigt.	0.69	0.68	0.70	0.69
Puffs/cigt.	7.5	7.4	9.2	9.0
Filler				
Wt. of tob., g (12.5% OV)	0.557	0.606	0.696	0.738
Rod Density, g/cc	0.203	0.214	0.204	0.217
Reconstituted Tob., %	24	24	24	24
E.S., %	None	None	None	None
Expanded Tobacco, %	25	20	25	20

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R. J. REYNOLDS
SUMMARY OF TOBACCO WEIGHT CHANGES

Thirteen additional brands have shown a tobacco weight reduction (2 to 84) since July, 1989. Previously, R. J. Reynolds had lowered tobacco weights on twenty-one brands.

Brand	Tobacco Weight, g/cigt. (12.5% CV)			Rod Density, g/cc		
	Previous	Present	% Change	Previous	Present	% Change
Camel 70 (MF)	0.798	0.772	(3)	0.233	0.214	(4)
Camel Lights 80 (Box)	0.674	0.650	(3)	0.227	0.217	(4)
More Lights Men. 100 (Box)	0.678	0.639	(6)	0.247	0.232	(6)
Now 85 Menthol	0.487	0.470	(4)	0.173	0.165	(5)
Now 100 Menthol	0.584	0.572	(2)	0.173	0.168	(3)
Ritz 100 (Box)	0.758	0.694	(8)	0.244	0.222	(9)
Ritz Menthol 100 (Box)	0.772	0.732	(5)	0.248	0.233	(6)
Salem Ultra Lights 100	0.788	0.748	(5)	0.234	0.228	(3)
Vantage Menthol 85	0.714	0.679	(4)	0.244	0.230	(5)
Vantage Ultra Lights 85	0.610	0.598	(2)	0.218	0.210	(4)
Vantage Ultra Lights 100	0.729	0.709	(3)	0.216	0.209	(3)
Winston Ultra Lights 85	0.601	0.574	(5)	0.212	0.202	(4)
Winston Ultra Lights 100	0.724	0.696	(4)	0.214	0.206	(3)

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**ANNUAL RECONSTITUTED TOBACCO,
EXPANDED TOBACCO AND EXPANDED STEM SURVEY**

Philip Morris and competitive brands were examined for their reconstituted tobacco, expanded tobacco and expanded stems.

The reconstituted tobacco of each manufacturer was microscopically examined to determine the composition and process by which each was made. Brown & Williamson was the only manufacturer that made a change in their reconstituted tobacco since these materials were examined in 1988.

Brown & Williamson uses three types of reconstituted tobacco. Two are made by the papermaking process. Brown & Williamson is again using an "RCB type" sheet. This sheet material is being used in their Viceroy 85 and 100 cigarettes. The "RCB type" sheet contains diammonium phosphate and is similar in every way to Philip Morris' RCB sheet material.

Philip Morris and Brown & Williamson are the only companies that use a two-toned cast sheet in their products (RCB). Brown & Williamson, Liggett Group and Lorillard use softwood fibers as well as tobacco leaf and stem in their reconstituted sheet material.

R. J. Reynolds and Lorillard are the only major tobacco manufacturers not using expanded stems in any of their cigarette blends.

Brown & Williamson is the only manufacturer that does not use expanded tobacco in all of their blends. The blends of Viceroy Lights 85 and 100, Raleigh Lights 85 and 100, Capri 100 (plain and menthol), Richland 100 and Richland Lights 85 and 100 do not contain expanded tobacco. Freon® is still detected in the filler of Reynolds, Lorillard, American and Liggett products.

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The following blend changes were made during 1989:

R. J. REYNOLDS

	<u>Vantage 85</u>		<u>Doral Lights Men. 85</u>	
	<u>Previous</u>	<u>Present</u>	<u>Previous</u>	<u>Present</u>
Expanded Tobacco, %	16	20	25	20

	<u>Doral Lights Men. 100</u>	
	<u>Previous</u>	<u>Present</u>
Expanded Tobacco, %	25	20

BROWN & WILLIAMSON

	<u>Viceroy 85</u>		<u>Viceroy 100</u>	
	<u>Previous</u>	<u>Present</u>	<u>Previous</u>	<u>Present</u>
Expanded Stems, %	13	7	13	7

A complete listing showing the levels of the various blend components of brands by manufacturer is given on pages 60 and 61.

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**CIGARETTES ON MARKET WITH
TAR AND NICOTINE DATA LISTED ON PACK**

	Tar, mg/cigt.			Nicotine, mg/cigt.		
	Listed On Package	FTC Data ¹	CI Data	Listed On Package	FTC Data ¹	CI Data
AMERICAN						
Ultra Carlton 85 (Box)	0.01	*	0.00	0.002	*	0.00
Carlton Menthol 85	1	1	2	0.1	0.1	0.1
Carlton 100 (Box)	1	1	2	0.1	0.1	0.2
Carlton 100 Menthol (Box)	1	1	1	0.1	0.1	0.1
Carlton 85	1	1	2	0.1	0.1	0.2
Carlton Menthol 100	3	4	5	0.3	0.4	0.4
Carlton 100	3	3	4	0.3	0.3	0.3
Carlton Menthol 120	6	6	6	0.6	0.6	0.5
Carlton 120	6	6	6	0.6	0.6	0.5
Lucky Strike Lights 85	8	8	8	**	0.6	0.7
Lucky Strike Lights 100	9	9	10	**	0.8	0.8
Tareyton Lights 85	5	5	6	**	0.4	0.4
LORILLARD						
Triumph Menthol 85	2	4	4	0.3	0.4	0.4
Triumph 85	3	4	4	0.4	0.4	0.3
Triumph 100	4	5	6	0.5	0.5	0.5
Triumph Menthol 100	4	6	6	0.5	0.6	0.5
PHILIP MORRIS						
B&W Deluxe Ultra Lts. 100 (Box)	6	6	6	0.6	0.5	0.5
B&W Deluxe Ultra Lts. Menthol 100 (Box)	6	5	6	0.6	0.5	0.4
Cambridge Ultra Lts. 100	5	5	5	**	0.4	0.4
Merit Ultra Lights 85	5	5	5	0.5	0.5	0.4
Merit Ultra Lights 85 (Box)	5	**	5	0.5	**	0.4
Merit Ultra Lights Men. 85	5	5	6	0.5	0.5	0.5
Merit Ultra Lights 100	6	6	6	0.6	0.4	0.5
Merit Ultra Lights 100 (Box)	6	**	6	0.6	**	0.6
Merit Ultra Lights Men. 100	6	5	6	0.6	0.5	0.5
Merit 85	8	8	8	0.6	0.6	0.6
Merit 85 (Box)	8	8	8	0.6	0.6	0.6
Merit Menthol 85	8	8	8	0.6	0.6	0.7
Merit 100	10	10	10	0.8	0.8	0.8
Merit Menthol 100	10	10	9	0.8	0.8	0.8
REYNOLDS						
Now 80 (Box)	<0.5	*	0.00	**	*	0.00
Now 85	1	1	2	**	0.1	0.1
Now Menthol 85	1	1	2	**	0.1	0.1
Now 100	2	2	2	**	0.2	0.2
Now Menthol 100	2	3	3	**	0.3	0.3
BROWN & WILLIAMSON						
Barclay 80 (Box)	3	-	-	**	-	-
Barclay 85	3	-	-	**	-	-
Barclay 100	5	-	-	**	-	-

¹ FTC data published December, 1988.

*Less than 0.5 mg tar and 0.05 mg nicotine.

**Not Listed.

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CIGARETTE BRANDS RANKED ACCORDING TO SIZE AND SALES¹
PHILIP MORRIS DATA

	SALES	FTC TAR, MG/CIGT.	NICOTINE, MG/CIGT.		SALES	FTC TAR, MG/CIGT.	NICOTINE, MG/CIGT.
120 MM FILTER PLATE				100 MM FILTER MENTHOL			
Moré	1.45	17.3	1.24	Salem Lights	4.36	8.2	0.69
<u>VA SLIMS LIGHTS (BOX)</u>	1.22	13.2	1.02	Salem	3.59	13.3	1.10
<u>SARATOGA (BOX)</u>	0.54	14.9	1.17	Kool	3.55	16.0	1.21
Carlton	0.43	8.5	0.51	<u>DENSON & HEDGES MEN.</u>	3.36	15.7	1.16
				Newport	2.22	17.3	1.26
120 MM FILTER MENTHOL				Doral Lights Men.	1.81	9.3	0.69
Moré Men.	1.25	17.0	1.27	Salem Ultra Lights	1.76	5.4	0.42
<u>VA SLIMS LIGHTS MEN. (BOX)</u>	0.91	13.6	1.03	<u>R & H DELUXE ULTRA LTS (BOX)</u>	1.72	5.5	0.43
Carlton Men.	0.42	8.6	0.54	<u>R & H LIGHTS MEN.</u>	1.67	10.4	0.85
<u>SARATOGA MEN. (BOX)</u>	0.25	14.7	1.11	<u>CAMBRIDGE LIGHTS MEN.</u>	1.09	11.0	0.89
				New Men.	0.99	3.3	0.26
100 MM FILTER PLATE				Bolais	0.69	8.3	0.63
<u>MARLBORO LIGHTS</u>	7.30	11.2	0.89	<u>ALPINE LIGHTS</u>	0.69	10.0	0.78
<u>MARLBORO</u>	6.45	16.5	1.19	Malibu (Low Tar) Menthol	0.63	11.4	0.93
Winston	5.02	16.1	0.98	<u>ALPINE</u>	0.59	13.3	1.08
Winston Lights	4.40	10.6	0.76	True Men.	0.49	8.6	0.73
<u>MARLBORO LIGHTS (BOX)</u>	3.76	11.6	0.88	<u>HERIT MEN.</u>	0.49	9.2	0.78
<u>DENSON & HEDGES</u>	3.09	15.7	1.15	<u>HERIT ULTRA LIGHTS MEN.</u>	0.47	5.4	0.49
Doral Lights	2.99	11.4	0.91	Doral Full Flavor Men.	0.44	13.4	1.11
<u>HERIT</u>	2.79	10.0	0.81	Kool Lights	0.41	8.6	0.75
<u>R & H DELUXE ULTRA LTS (BOX)</u>	2.42	6.1	0.49	<u>MARLBORO LIGHTS MEN. (BOX)</u>	0.40	9.7	0.78
Carlton	2.02	3.7	0.32	Pyramid Lights	0.32	14.1	1.07
Vantage	1.99	9.0	0.66	Kool Ultra 100's	0.29	"	"
<u>CAMBRIDGE LIGHTS</u>	1.94	12.1	0.91	Newport Lights	0.23	8.9	0.62
<u>R & H LIGHTS</u>	1.89	11.1	0.88	Vantage Men.	0.21	8.9	0.65
<u>HERIT ULTRA LIGHTS</u>	1.88	5.8	0.51	<u>PLAYERS LIGHTS MEN. 25's</u>	0.20	11.4	0.90
Doral Full Flavor	1.85	14.9	1.00	<u>R & H LIGHTS MEN. (BOX)</u>	0.19	10.4	0.78
New	1.77	2.1	0.20	Ritz (Box)	0.10	11.1	0.81
Full Mail	1.71	16.6	1.21	Kent Golden Lights Men.	0.10	9.2	0.82
Vantage Ultra Lights	1.69	5.7	0.46	Satin Men.	0.08	10.8	0.92
<u>CAMBRIDGE ULTRA LIGHTS</u>	1.33	4.9	0.42	Savvy Lights	0.05	10.2	0.90
Kent	1.32	12.7	0.93				
<u>CAMBRIDGE FULL FLAVOR</u>	1.26	16.0	1.10	100 MM FILTER SLIM			
Winston Ultra Lights	1.25	5.3	0.42	<u>VIRGINIA SLIMS</u>	1.95	14.0	1.02
Viceroy	1.17	17.9	1.30	<u>VA SLIMS LIGHTS (BOX)</u>	1.82	6.3	0.70
Kent III	1.12	8.5	0.47	<u>VA SLIMS UL (BOX)</u>	1.05	6.0	0.49
Carlton (Box)	1.02	1.5	0.13	Capri (Box)	1.00	9.3	0.76
Camel Lights	0.97	10.6	0.75	Moré Lights (Box)	0.21	10.1	0.76
Century Lights 25's	0.91	11.5	0.88				
True	0.90	7.9	0.70	100 MM FILTER SLIM MENTHOL			
Kent Golden Lights	0.88	9.0	0.79	<u>VA SLIMS LIGHTS MEN. (BOX)</u>	2.02	8.9	0.72
Malibu Lights	0.84	9.1	0.76	Salem Slim Lights (Box)	1.68	8.9	0.69
Doral Ultra Lights	0.80	5.3	0.48	<u>VIRGINIA SLIMS MEN.</u>	1.62	14.4	1.04
Richland 25's	0.75	16.5	1.23	<u>VA SLIMS UL MEN (BOX)</u>	0.90	5.6	0.46
Raleigh	0.74	14.3	0.82	Capri Men (Box)	0.87	8.9	0.71
Century 25's	0.65	13.8	1.03	Moré Lights Men. (Box)	0.18	9.0	0.66
Century Lights 25's	0.61	11.5	0.88				
American Lights	0.58	11.6	0.91				
Viceroy Lights	0.55	12.6	0.96				
Richland Lights 25's	0.47	12.5	0.93				
Malibu	0.43	15.1	1.25				
<u>PLAYERS LIGHTS 25's</u>	0.33	11.7	0.90				
<u>HERIT ULTRA LIGHTS (BOX)</u>	0.32	6.2	0.56				
Winston Lights (Box)	0.32	10.4	0.72				
Pyramid Ultra Lights	0.32	5.9	0.32				
Pyramid Lights	0.32	13.4	1.04				
Barclay	0.25	"	"				
Raleigh Lights	0.21	12.8	0.96				
<u>R & H LIGHTS (BOX)</u>	0.21	10.7	0.85				
L & M	0.20	12.8	1.00				
American Filters	0.20	15.4	1.14				
Satin	0.12	10.8	0.88				
Ritz (Box)	0.07	9.3	0.75				
Savvy Lights	0.05	10.2	0.89				
Chesterfield Lights	0.05	10.1	0.84				
Savvy Ultra Lights	0.05	5.8	0.57				
Malibu Ultra Lights	-	6.2	0.49				

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1969.

²See page XII.

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CIGARETTE BRANDS RANKED ACCORDING TO SIZE AND SALES¹
PHILIP MORRIS DATA

	SALES	FTC TAR, MG/CIGT.	NICOTINE, MG/CIGT.		SALES	FTC TAR, MG/CIGT.	NICOTINE MG/CIGT.
100 MM FILTER CHARCOAL				85 MM FILTER MENTHOL			
PARLIAMENT LIGHTS	1.37	11.7	0.99	Kool	9.64	15.7	1.12
Tareyton	1.17	13.1	0.95	Newport	6.21	16.3	1.18
Lark Lights	0.18	12.3	0.98	Salem Lights	5.64	9.3	0.69
Tareyton Long Lights	0.15	8.1	0.69	Salem	5.41	15.7	1.13
				Kool Milds	2.77	11.8	0.93
85 MM FILTER CHARCOAL				Salem Ultra Lights	1.22	5.5	0.43
Tareyton	1.28	12.9	0.90	Doral Lights Men.	0.96	9.5	0.68
Lark Lights	0.24	11.7	0.91	MARLBORO NEW.	0.93	15.8	1.08
85 MM MULTIFILTER	0.13	11.5	0.87	Belair	0.84	10.8	0.79
Tareyton Lights	0.07	8.8	0.43	Newport Lights	0.82	8.5	0.73
				Vantage Men.	0.68	9.5	0.64
85 MM FILTER FLAVOR				MERIT MEN.	0.56	8.0	0.68
MARLBORO	20.94	15.9	1.13	ALZINE	0.55	15.1	1.02
MARLBORO LIGHTS	15.66	10.9	0.83	True Men.	0.52	5.0	0.44
Winston	14.14	15.1	1.05	ALZINE LIGHTS	0.52	9.4	0.72
MARLBORO LIGHTS (BOX)	11.96	10.5	0.79	MERIT ULTRA LIGHTS MEN.	0.52	5.9	0.50
Winston Lights	6.81	9.3	0.65	MARLBORO LIGHTS NEW (BOX)	0.51	9.7	0.77
Vantage	3.77	8.2	0.58	Kool Lights	0.48	7.7	0.68
MERIT	3.61	7.6	0.62	CAMBRIDGE LIGHTS MEN.	0.48	12.1	0.92
Camel	3.55	14.2	0.94	Carleton Men.	0.42	1.5	0.14
Camel Lights	3.45	10.9	0.76	Doral Full Flavor Men.	0.35	15.4	1.07
MERIT ULTRA LIGHTS	2.46	4.9	0.42	Richland Men. 25's	0.28	14.9	0.97
Viceroy	2.22	17.1	1.24	New Men.	0.26	1.5	0.13
Doral Lights	2.01	9.7	0.75	Kool Ultra	0.26	"	"
Kent	1.90	11.8	0.87	Malibu Menthol	0.15	15.4	1.17
Vantage Ultra Lights	1.41	5.6	0.42	PLAYERS LIGHTS MEN. 25's	0.06	9.4	0.74
Carleton	1.38	1.6	0.16	Kent Golden Lights Men.	0.04	8.2	0.66
CAMBRIDGE LIGHTS	1.32	11.3	0.88				
Doral Full Flavor	1.30	14.2	1.02	80 MM FILTER (BOX)			
True	1.17	5.2	0.43	MARLBORO (BOX)	25.07	15.8	1.12
Doral Ultra Lights	1.13	5.3	0.46	Winston (Box)	1.56	15.5	0.95
MERIT (BOX)	1.03	7.6	0.62	PARLIAMENT LIGHTS (BOX)	1.30	9.1	0.76
MARLBORO 25's	1.00	16.1	1.13	Camel Lights (Box)	0.87	8.9	0.59
Winston Ultra Lights	0.97	5.7	0.45	Winston Lights (Box)	0.64	9.1	0.59
CAMBRIDGE FULL FLAVOR	0.97	15.9	1.10	Magna (Box)	0.56	13.3	0.84
Kent III	0.95	3.8	0.31	Kool Milds (Box)	0.55	11.7	0.89
Raleigh	0.94	14.2	0.91	Magna Lites (Box)	0.42	8.8	0.62
Kent Golden Lights	0.92	8.1	0.69	Kent (Box)	0.09	11.0	0.81
L & M	0.82	12.8	1.00	Doral Full Flavor (Box)	0.00	13.5	0.76
New	0.72	1.5	0.14				
PARLIAMENT LIGHTS	0.69	9.3	0.76	85 MM NONFILTER			
Richland 25's	0.68	16.1	1.13	Pall Mall	7.77	22.5	1.49
Magna	0.61	12.8	0.89	Chesterfield King	0.75	20.4	1.38
Viceroy Lights	0.52	11.0	0.88	Pyramid	0.32	21.2	1.35
MERIT ULTRA LIGHTS (BOX)	0.52	5.1	0.43	COMMANDER KING SIZE	0.23	23.8	1.37
MARLBORO LIGHTS 25's	0.50	19.7	0.81				
Magna Lites	0.48	10.9	0.76	75 MM NONFILTER			
Old Gold	0.43	16.0	1.14	Camel	4.65	20.0	1.31
American Lights	0.38	11.6	0.91	Lucky Strike	1.17	23.6	1.48
Richland Lights 25's	0.34	19.3	0.82	COMMANDER REGULAR	0.03	20.9	1.34
Pyramid Lights	0.32	14.0	1.07				
Barsley	0.25	"	"				
Lucky Strike	0.23	13.2	1.03				
Century Lights 25's	0.24	8.7	0.68				
Raleigh Lights	0.21	11.4	0.86				
Century 25's	0.21	14.5	0.94				
Malibu Lights	0.20	8.8	0.75				
American Filters	0.20	15.7	1.14				
Malibu	0.17	15.0	1.12				
PLAYERS LIGHTS 25's	0.12	10.5	0.81				
Chesterfield Lights	0.05	9.9	0.83				

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Tar and Nicotine Content of Two Hundred Seven Two (272) Varieties of Domestic Cigarettes

* Filter/ H⁺ = nonfilter/ H⁺ = nonbath; H⁺ = hard push; H⁺ = soft push; mm = millimeter
* Indicated "tar" below 0.5 mg; nicotine below 0.05 mg per cigarette.

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PHILIP MORRIS DATA

BRANDS RANKED ACCORDING TO FTC TAR

BRAND	SIZE	FTC TAR, MG/CIQT.	NICOTINE, MG/CIQT.	BRAND	SIZE	FTC TAR, MG/CIQT.	NICOTINE, MG/CIQT.
1. Carlton Men. (Box)	100M	1.0	0.1	66. Malibu Lights	KF	8.8	0.75
2. New Men.	KFM	1.3	0.13	67. Camel Lights (Box)	LF	8.9	0.59
3. Carlton (Box)	100	1.3	0.13	68. Vantage Men.	100	8.9	0.65
4. New	KF	1.3	0.14	69. Salem Slim Lights (Box)	100M	8.9	0.69
5. Carlton Men.	KFM	1.3	0.14	70. Capri 100 Manthel	100M	8.9	0.71
6. Carlton	KF	1.6	0.16	71. VA SLIM LIGHTS MEN. (BOX)	100M	8.9	0.72
7. New	100	2.1	0.20	72. Newport Lights (Box)	100M	8.9	0.81
8. New Men.	100M	3.3	0.26	73. Newport Lights	100M	8.9	0.82
9. Triumph	KF	3.6	0.31	74. Vantage	100	9.0	0.66
10. Carlton	100	3.7	0.32	75. More Lights Men. (Box)	100M	9.0	0.66
11. Kent III	KF	3.8	0.31	76. Kent Golden Lights	100	9.0	0.79
12. Triumph Men.	KFM	3.9	0.35	77. Winston Lights (Box)	LF	9.1	0.59
13. CAMBRIDGE ULTRA LIGHTS	100	4.9	0.42	78. Malibu Lights	100	9.1	0.76
14. Carlton Men.	100M	4.9	0.42	79. PARLIAMENT LIGHTS (BOX)	LF	9.1	0.76
15. MERIT ULTRA LIGHTS	KF	4.9	0.42	80. MERIT MEN.	100M	9.2	0.78
16. Tree Men.	KFM	5.0	0.44	81. Kent Golden Lights Men.	100M	9.2	0.82
17. MERIT ULTRA LIGHTS (BOX)	KF	5.1	0.43	82. Winston Lights	KF	9.3	0.63
18. Tree	KF	5.2	0.43	83. Salem Lights	KFM	9.3	0.68
19. Kent III (Box)	100	5.2	0.46	84. Doral Lights Men.	100M	9.3	0.69
20. Winston Ultra Lights	100	5.3	0.42	85. Ritz (Box)	100	9.3	0.75
21. Doral Ultra Lights	100	5.3	0.48	86. Capri 100	100	9.3	0.76
22. Salem Ultra Lights	100M	5.4	0.42	87. PARLIAMENT LIGHTS	KF	9.3	0.76
23. MERIT ULTRA LIGHTS MEN.	100M	5.4	0.49	88. ALPINE LIGHTS	KFM	9.4	0.72
24. Salem Ultra Lights	KFM	5.5	0.43	89. PLAYERS LIGHTS MEN. 25's	KF	9.4	0.74
25. RAN DELIVER U.L. MEN. (BOX)	100M	5.5	0.43	90. Vantage Men.	KFM	9.5	0.64
26. Doral Ultra Lights	KF	5.5	0.46	91. Doral Lights Men.	KFM	9.5	0.68
27. Kent III	100	5.5	0.47	92. Kent Golden Lights (Box)	100	9.5	0.86
28. Carlton	120	5.5	0.51	93. Lucky Strike Lights	100	9.6	0.80
29. Vantage Ultra Lights	KF	5.6	0.42	94. Doral Lights	KF	9.7	0.73
30. VIRGINIA SLIM UL. MEN.	100M	5.6	0.46	95. MARLBORO LIGHTS MEN. (BOX)	KFM	9.7	0.77
31. Triumph Men.	100M	5.6	0.47	96. Fall Mail Lights	100	9.9	0.82
32. Carlton Men.	120M	5.6	0.54	97. Chesterfield Lights	KF	9.9	0.83
33. Winston Ultra Lights	KF	5.7	0.45	98. ALPINE LIGHTS	100M	10.0	0.78
34. Vantage Ultra Lights	100	5.7	0.46	99. MERIT	100	10.0	0.81
35. Triumph	100	5.7	0.49	100. More Lights (Box)	100	10.1	0.76
36. Tarayton Lights	KFC	5.8	0.43	101. Chesterfield Lights	100	10.1	0.84
37. MERIT ULTRA LIGHTS	100	5.8	0.51	102. Savvy Lights	100	10.2	0.89
38. Savvy Ultra Lights	100	5.8	0.57	103. Savvy Lights	100M	10.2	0.90
39. MERIT ULTRA LIGHTS MEN.	KFM	5.9	0.50	104. Richland Lights 25's	KF	10.3	0.82
40. Pyramid Ultra Lights	100	5.9	0.52	105. Winston Lights 100 (Box)	100	10.4	0.72
41. VIRGINIA SLIM ULTRA LTR	100	6.0	0.49	106. RAN LIGHTS 100 MEN. (BOX)	100M	10.4	0.78
42. RAN DELIVER U.L. (BOX)	100	6.1	0.49	107. RAN LIGHTS MEN.	100M	10.4	0.83
43. Malibu Ultra Lights	100	6.2	0.49	108. Belair	KFM	10.5	0.79
44. MERIT ULTRA LIGHTS (BOX)	100	6.2	0.56	109. MARLBORO LIGHTS (BOX)	KF	10.5	0.79
45. MERIT	KF	7.6	0.62	110. PLAYERS LIGHTS 25's	KF	10.5	0.81
46. MERIT (BOX)	KF	7.6	0.62	111. Camel Lights	100	10.6	0.75
47. Keel Lights	KFM	7.7	0.68	112. Winston Lights	100	10.6	0.76
48. Kent Golden Lights (Box)	LF	7.9	0.69	113. Silva Thins Men.	100M	10.6	0.91
49. Tree	100	7.9	0.70	114. MARLBORO LIGHTS 25's	KF	10.7	0.81
50. MERIT MEN.	KFM	8.0	0.68	115. Silva Thins	100	10.7	0.85
51. Newport Lights (Box)	LFM	8.0	0.71	116. RAN LIGHTS 100 (BOX)	100	10.7	0.83
52. Kent Golden Lights	KF	8.1	0.69	117. Satin	100	10.8	0.88
53. Tarayton Long Lights	100C	8.1	0.69	118. Satin Men.	100M	10.8	0.92
54. Vantage	KF	8.2	0.58	119. Magna Lites	KF	10.9	0.76
55. Kent Golden Lights Men.	KFM	8.2	0.66	120. Camel Lights	KF	10.9	0.76
56. Lucky Strike Lights	KF	8.2	0.67	121. MARLBORO LIGHTS	KF	10.9	0.83
57. Salem Lights	100M	8.2	0.69	122. Kent (Box)	LF	11.0	0.81
58. Belair	100M	8.3	0.63	123. Viceroy Lights	KF	11.0	0.89
59. VA SLIM LIGHTS (BOX)	100	8.3	0.70	124. MARLBORO LIGHTS (BOX)	100	11.0	0.89
60. Old Gold Lights	KF	8.3	0.75	125. Lucky Strike Men.	100M	11.0	0.89
61. Newport Lights	KFM	8.5	0.73	126. CAMBRIDGE LIGHTS MEN.	100M	11.1	0.81
62. Tree Men.	100M	8.6	0.73	127. Ritz Men.	100M	11.1	0.81
63. Keel Lights	100M	8.6	0.75	128. RAN LIGHTS	100	11.1	0.88
64. Century Lights 25's	KF	8.7	0.68	129. MARLBORO LIGHTS	100	11.2	0.89
65. Magna Lites (Box)	LF	8.8	0.62	130. CAMBRIDGE LIGHTS	KF	11.3	0.88

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PHILIP MORRIS DATA

BRANDS RANKED ACCORDING TO FTC TAR

BRAND	SIZE	FTC TAR, MG/CIGT.	NICOTINE, MG/CIGT.	BRAND	SIZE	FTC TAR, MG/CIGT.	NICOTINE, MG/CIGT.
131. Raleigh Lights	KF	11.4	0.86	197. ALPINE	KFM	15.1	1.02
132. PLAYERS LIGHTS MEN. 25's	100M	11.4	0.90	198. Winston	KF	15.1	1.05
133. Doral Lights	100	11.4	0.91	199. Newport (Box)	LPM	15.1	1.08
134. Malibu (Low Tar) Menthol	100M	11.4	0.93	200. Malibu	100	15.1	1.25
135. Eve Slim Lights Men. (Box)	100M	11.4	0.93	201. ALPINE	100M	15.3	1.08
136. PLAYERS MEN. (BOX)	KFM	11.5	0.86	202. Salem	100M	15.3	1.10
137. RAN MULTIFILTER	KFC	11.5	0.87	203. Doral Full Flavor	KFM	15.4	1.07
138. Century Lights 25's	100	11.5	0.88	204. Doral Full Flavor	100M	15.4	1.11
139. Keel Milds	100M	11.5	0.92	205. American Filters	100	15.4	1.14
140. American Lights	KF	11.6	0.91	206. Malibu Menthol	KFM	15.4	1.17
141. American Lights	100	11.6	0.91	207. Winston (Box)	LF	15.5	0.95
142. Keel Milds (Box)	LPM	11.7	0.89	208. Camel (Box)	LF	15.5	1.00
143. PLAYERS LIGHTS 25's	100	11.7	0.90	209. MARLBORO MEN.	KFM	15.5	1.08
144. Lark Lights	KFC	11.7	0.91	210. Keel	KFM	15.7	1.12
145. PARLIAMENT LIGHTS	100C	11.7	0.99	211. Salem	KFM	15.7	1.13
146. Kent	KF	11.8	0.87	212. Newport 25's	KFM	15.7	1.14
147. PLAYERS (BOX)	KF	11.8	0.90	213. MARLBORO (BOX)	100	15.7	1.14
148. Keel Milds	KFM	11.8	0.93	214. American Filters	KF	15.7	1.14
149. Eve Slim Lights (Box)	100	11.8	0.96	215. BENSON & HEDGES	100	15.7	1.15
150. CAMBRIDGE LIGHTS	100	12.1	0.91	216. BENSON & HEDGES MEN.	100M	15.7	1.16
151. CAMBRIDGE LIGHTS MEN.	KFM	12.1	0.92	217. Century 25's	100	15.8	1.03
152. Lark Lights	100C	12.3	0.98	218. MARLBORO (BOX)	LF	15.8	1.12
153. Richland Lights 25's	100	12.5	0.93	219. CAMBRIDGE FULL FLAVOR	KF	15.9	1.10
154. Lucky Strike	100	12.5	0.98	220. MARLBORO	KF	15.9	1.13
155. KX-LTR (BOX)	100	12.5	1.06	221. CAMBRIDGE FULL FLAVOR	100	16.0	1.10
156. Viceroy Lights	100	12.6	0.96	222. Old Gold	KF	16.0	1.14
157. Eve Lights (Box)	120	12.6	1.11	223. Keel	100M	16.0	1.21
158. Kent	100	12.7	0.93	224. Max	120	16.0	1.24
159. Magna	KF	12.8	0.89	225. Winston	100	16.1	0.98
160. Raleigh Lights	100	12.8	0.96	226. MARLBORO 25's	KF	16.1	1.13
161. LAM	KF	12.8	1.00	227. Richland 25's	KF	16.1	1.13
162. LAM	100	12.8	1.00	228. P.M. INTL (BOX)	100	16.1	1.16
163. Lark	KFC	12.8	1.10	229. BENSON & HEDGES (BOX)	100	16.1	1.18
164. Tarayton	KFC	12.9	0.90	230. Max Men.	120M	16.2	1.24
165. Tarayton	100C	13.1	0.95	231. Newport	KFM	16.3	1.18
166. LAM (Box)	LF	13.1	1.04	232. P.M. INTL MEN. (BOX)	100M	16.3	1.22
167. Eve Lights Men. (Box)	120M	13.1	1.14	233. MARLBORO	100	16.5	1.19
168. VA SLIM LIGHTS (BOX)	120	13.2	1.02	234. Richland 25's	100	16.5	1.23
169. Lucky Strike (Box)	KF	13.2	1.03	235. Pall Mall	100	16.6	1.21
170. Magna (Box)	LF	13.3	0.84	236. BENSON & HEDGES MEN. (BOX)	100M	16.8	1.18
171. PLAYERS MEN. (BOX)	100M	13.3	1.01	237. More Men.	120M	17.0	1.27
172. PLAYERS (BOX)	100	13.3	1.03	238. Viceroy	KF	17.1	1.24
173. Kent Men.	100M	13.4	0.98	239. Tall	120	17.2	1.47
174. Pyramid Lights	100	13.4	1.04	240. More	120	17.3	1.24
175. Doral Full Flavor (Box)	LF	13.5	0.76	241. Newport	100M	17.3	1.26
176. VA SLIM LIGHTS MEN. (BOX)	120M	13.6	1.03	242. Chesterfield	KMF	17.6	1.14
177. Lark	100C	13.8	1.16	243. Spring	100M	17.7	1.37
178. VIRGINIA SLIM	100	14.0	1.02	244. Viceroy	100	17.9	1.30
179. Pyramid Lights	KF	14.0	1.07	245. Newport 25's	100M	18.0	1.33
180. Pyramid Lights	100M	14.1	1.07	246. Old Gold	100	18.0	1.41
181. Raleigh	KF	14.2	0.91	247. Tall Men.	120M	18.4	1.57
182. Camel	KF	14.2	0.94	248. Keel	KFM	18.7	1.31
183. Doral Full Flavor	KF	14.2	1.02	249. Camel	KMF	20.0	1.31
184. Pall Mall	KF	14.2	1.06	250. Chesterfield King	KMF	20.4	1.38
185. Raleigh	100	14.3	0.82	251. COMMANDER REGULAR	KMF	20.6	1.34
186. VIRGINIA SLIM MEN.	100M	14.4	1.04	252. Pyramid	KMF	21.2	1.35
187. Century 25's	KF	14.5	0.94	253. Raleigh	KMF	22.0	1.30
188. Keel (Box)	LPM	14.7	1.00	254. Pall Mall	KMF	22.5	1.49
189. SARATOGA MEN. (BOX)	120M	14.7	1.11	255. N. Tarayton	KMF	22.8	1.60
190. St. Morris	100	14.7	1.13	256. PLAYERS (BOX)	KMF	23.2	1.60
191. St. Morris Men.	100M	14.8	1.02	257. ENGLISH OVALS (BOX)	KMF	23.2	1.79
192. BENSON & HEDGES (BOX)	KF	14.8	1.27	258. Lucky Strike	KMF	23.6	1.48
193. Richland Men. 25's	KFM	14.9	0.97	259. COMMANDER KING SIZE	KMF	23.8	1.57
194. Doral Full Flavor	100	14.9	1.00	260. Old Gold	KMF	23.8	1.60
195. SARATOGA (BOX)	120	14.9	1.17				
196. Malibu	KF	15.0	1.12				

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ULTRA LOW TAR 85 MM FILTER CIGARETTES
(6 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>Nav</u>	<u>Carlton</u>	<u>Kent III</u>	<u>Merit Ultra Lts.</u>	<u>Merit Ultra Lts. (Box)</u>
¹Sales	0.72	1.38	0.95	2.46	0.52
Smoka					
FTC Tar, mg/cigt.	1.5	1.6	3.8	4.9	5.1
Nicotine, mg/cigt.	0.14	0.16	0.31	0.42	0.43
Puffs/cigt.	6.1	6.6	6.8	7.2	7.4
Filtration Eff., %	74	74	64	64	62
Filler Rod TPM, mg/cigt.	23.5	23.5	27.3	27.7	28.1
CO, mg/cigt.	2.3	1.9	3.7	5.2	5.5
Cigarette					
Total RTD, mm of H ₂ O	107	114	107	110	110
Static Burn. Time, min.	5.3	5.5	6.0	6.8	6.9
Length, mm	84.1	83.2	84.0	84.0	83.1
Circumference, mm	25.0	24.9	24.9	24.9	24.9
Paper					
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.7	1.8	1.8	0.5
Permeability, ml/cm ² x min.	38	48	32	46	47
Filter					
Type	CA	CA	-	CA	CA
Inner	-	-	CA	-	-
Outer	-	-	CA	-	-
RTD, mm of H ₂ O	160	152	117	131	131
Length, mm	27.9	25.2	24.9	27.0	27.1
Weight, g	0.19	0.18	0.15	0.18	0.18
Fiber densier/shape	2.1/Y	2.0/Y	-	3.0/Y	3.2/Y
Inner	-	-	1.8/Y	-	-
Outer	-	-	2.9/Y	-	-
Tipping Paper					
Length, mm	31.0	30.0	32.0	32.0	32.0
Color	White	White	White	Cork	Cork
Ventilation, %	74	72	60	53	52
Filler					
Total alkaloids, % (DWS)	2.37	2.29	2.36	2.23	2.14
Total red. sugars, % (DWS)	4.8	5.6	5.7	5.9	5.6
Reconstituted Tob., %	15	20	16	22	22
Expanded Stems, %	None	None	None	None	None
Expanded Tob., %	53	46	25	21	21
Wt. of Tob., g (12.5% OV)	0.473	0.531	0.585	0.605	0.604
Rod Length, mm	56.3	58.0	59.1	57.0	56.0
Rod Density, g/cc	0.169	0.185	0.201	0.215	0.219

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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ULTRA LOW TAR 85 MM FILTER CIGARETTES
(6 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

<u>True</u>	<u>Vantage Ultra Lights</u>	<u>Winston Ultra Lights</u>	<u>Barclay*</u>	
1.17	1.41	0.97	0.25	'Sales
				Smoke
5.2	5.6	5.7	*	FTC Tar, mg/cigt.
0.43	0.42	0.45	*	Nicotine, mg/cigt.
7.8	6.8	6.6	*	Puffs/cigt.
59	62	61	61	Filtration Eff., %
27.6	28.0	27.0	31.5	Filler Rod TPM, mg/cigt.
5.3	7.0	7.1	*	CO, mg/cigt.
				Cigarette
63	115	119	46	Total RTD, mm of H ₂ O
6.6	6.4	6.3	7.7	Static Burn. Time, min.
84.4	83.8	84.0	83.8	Length, mm
24.9	25.0	25.0	24.9	Circumference, mm
				Paper
Cit.	Cit.	Cit.	Cit.	Component Type
0.6	1.6	1.6	0.4	Component Percent
40	25	25	25	Permeability, ml/cm ² x min.
				Filter
-	CA	CA	CA	Type
CA	-	-	-	Inner
PL	-	-	-	Outer
111	129	133	89	RTD, mm of H ₂ O
25.0	26.8	27.0	26.9	Length, mm
0.18	0.20	0.19	0.20	Weight, g
-	2.6/Y	2.7/Y	2.4/Y	Fiber denier/shape
1.9/Y	-	-	-	Inner
-	-	-	-	Outer
				Tipping Paper
30.0	31.0	31.0	32.0	Length, mm
White	White	Cork	Cork	Color
60	50	46	82	Ventilation, %
				Filler
2.33	2.14	2.18	2.07	Total alkaloids, % (DMB)
5.4	7.3	6.4	6.4	Total red. sugars, % (DMB)
20	24	24	14	Reconstituted Tob., %
None	None	None	7	Expanded Stems, %
14	25	25	11	Expanded Tob., %
0.669	(0.595)	(0.574)	0.674	Wt. of Tob., g (12.5% OV)
59.4	57.0	57.0	56.9	Rod Length, mm
0.228	(0.210)	(0.202)	0.240	Rod Density, g/cc

*The FTC has determined that the present testing methodology does not accurately measure Brown & Williamson's Barclay and KOOL Ultra cigarette smoke deliveries. Data are given on page XII.

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LOW TAR 85 MM FILTER CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>Merit</u>	<u>Merit</u> <u>(Box)</u>	<u>Kent</u> <u>Golden</u> <u>Lights</u>	<u>Vantage</u>
¹Sales	3.61	1.03	0.92	3.77
<u>Smoke</u>				
FTC Tar, mg/cigt.	7.6	7.6	8.1	8.2
Nicotine, mg/cigt.	0.62	0.62	0.69	0.58
Puffs/cigt.	7.6	7.3	7.1	7.3
Filtration Eff., %	61	60	52	60
Filler Rod TPM, mg/cigt.	28.4	27.3	28.5	28.5
CO, mg/cigt.	8.4	8.8	7.2	10.7
<u>Cigarette</u>				
Total RTD, mm of H ₂ O	122	124	106	134
Static Burn. Time, min.	7.2	7.6	6.7	6.9
Length, mm	84.1	82.9	83.9	83.9
Circumference, mm	24.9	24.9	25.0	25.1
<u>Paper</u>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	1.7	1.4	2.1	1.0
Permeability, ml/cm ² x min.	44	43	32	37
<u>Filter</u>				
Type	CA	CA	CA	CA
RTD, mm of H ₂ O	116	115	86	111
Length, mm	27.0	27.0	24.9	25.1
Weight, g	0.17	0.18	0.15	0.29
Fiber denier/shape	2.7/Y	2.5/Y	3.1/Y	1.6/R
Tipping Paper				
Length, mm	32.0	32.0	32.0	30.0
Color	Cork	Cork	White	Cork
Ventilation, %	32	29	36	25
<u>Filler</u>				
Total alkaloids, % (DWB)	2.09	2.09	2.29	1.87
Total red. sugars, % (DWB)	6.4	6.5	7.7	6.5
Reconstituted Tob., %	22	22	22	24
Expanded Stems, %	3	3	None	None
Expanded Tob., %	12	12	11	20
Wt. of Tob., g (12.5% OV)	0.669	0.660	0.678	0.655
Rod Length, mm	57.1	55.8	59.0	58.8
Rod Density, g/cc	0.238	0.239	0.231	0.222

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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LOW TAR 85 MM FILTER CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

<u>Winston Lights</u>	<u>Parliament Lights</u>	<u>Marlboro Lights (Mox)</u>	<u>Marlboro Lights 25's</u>	
6.81	0.69	11.96	0.50	'Sales
				Smoke
9.3	9.3	10.5	10.7	FTC Tar, mg/cigt.
0.65	0.76	0.79	0.81	Nicotine, mg/cigt.
7.1	7.8	8.1	8.4	Puffs/cigt.
58	56	57	57	Filtration Eff., %
27.8	28.0	31.9	31.3	Filler Rod TPM, mg/cigt.
10.3	9.1	10.2	10.6	CO, mg/cigt.
				Cigarette
123	118	120	118	Total RTD, mm of H ₂ O
7.1	7.1	8.2	8.2	Static Burn. Time, min.
83.8	83.9	83.1	84.3	Length, mm
25.0	24.8	25.0	25.0	Circumference, mm
				PAPER
Cit.	Cit.	Cit.	Cit.	Component Type
0.5	2.3	0.5	0.3	Component Percent
40	47	32	34	Permeability, ml/cm ² x min.
				Filter
CA	CA	CA	CA	Type
101	119	100	105	RTD, mm of H ₂ O
26.8	25.0	27.0	27.0	Length, mm
0.18	0.13	0.17	0.17	Weight, g
2.8/Y	2.5/Y	3.0/Y	3.0/Y	Fiber denier/shape
				Tipping Paper
31.0	30.0	31.0	31.0	Length, mm
Cork	White	White	White	Color
20	33	22	25	Ventilation, %
				Filler
1.80	2.16	2.04	2.10	Total alkaloids, % (DWB)
6.7	6.9	6.8	7.0	Total red. sugars, % (DWB)
24	22	22	22	Reconstituted Tob., %
None	3	3	3	Expanded Stems, %
16	12	12	12	Expanded Tob., %
0.632	0.693	0.670	0.682	Wt. of Tob., g (12.5% OV)
57.0	58.9	56.1	57.4	Rod Length, mm
0.222	0.240	0.241	0.240	Rod Density, g/cc

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LOW TAR 85 MM FILTER CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>Camel</u> <u>Lights</u>	<u>Marlboro</u> <u>Lights</u>	<u>Raleigh</u> <u>Lights</u>
Sales	3.45	15.66	0.21
Smoke			
FTC Tar, mg/cigt.	10.9	10.9	11.4
Nicotine, mg/cigt.	0.76	0.83	0.86
Puffs/cigt.	7.2	8.3	8.0
Filtration Eff., %	60	56	59
Filler Rod TPM, mg/cigt.	29.3	31.8	29.6
CO, mg/cigt.	10.4	10.9	12.3
Cigarette			
Total RTD, mm of H ₂ O	114	122	134
Static Burn. Time, min.	7.7	8.1	7.5
Length, mm	84.1	84.2	83.5
Circumference, mm	25.0	24.9	25.0
PAPER			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.5	0.9
Permeability, ml/cm ² x min.	30	32	30
Filter			
Type	CA	CA	CA
RTD, mm of H ₂ O	83	99	102
Length, mm	27.0	27.0	26.6
Weight, g	0.18	0.17	0.17
Fiber denier/shape	2.4/Y	3.0/Y	3.0/Y
Tipping Paper			
Length, mm	31.0	31.0	32.0
Color	Cork	White	Cork
Ventilation, %	15	21	18
Filler			
Total alkaloids, % (DWB)	1.86	2.07	2.10
Total red. sugars, % (DWB)	6.9	7.2	6.7
Reconstituted Tob., %	24	22	16
Expanded Stems, %	None	3	5
Expanded Tob., %	16	12	None
Wt. of Tob., g (12.5% OV)	0.638	0.684	0.728
Rod Length, mm	57.2	57.2	56.9
Rod Density, g/cc	0.224	0.242	0.257

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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2031438355

LOW TAR 85 MM FILTER CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

<u>Kent</u>	<u>L & M</u>	<u>Lucky Strike</u>	
1.90	0.82	0.25	¹ Sales
			Smoke
11.8	12.8	13.2	FTC Tar, mg/cigt.
0.87	1.00	1.03	Nicotine, mg/cigt.
8.3	7.5	8.4	Puffs/cigt.
52	45	49	Filtration Eff., %
27.6	27.5	28.9	Filler Rod TPM, mg/cigt.
11.9	11.9	13.0	CO, mg/cigt.
			Cigarette
137	109	123	Total RTD, mm of H ₂ O
7.2	7.6	8.3	Static Burn. Time, min.
84.3	84.1	82.9	Length, mm
25.0	24.7	25.0	Circumference, mm
			Paper
Cit.	Cit.	Cit.	Component Type
0.6	0.4	0.8	Component Percent
37	171*	26	Permeability, ml/cm ² x min.
			Filter
CA	CA	CA	Type
91	66	74	RTD, mm of H ₂ O
20.9	24.7	25.0	Length, mm
0.14	0.14	0.16	Weight, g
3.0/Y	3.7/Y	2.8/Y	Fiber denier/shape
			Tipping Paper
25.0	30.0	30.0	Length, mm
White	White	Cork	Color
16	None	13	Ventilation, %
			Filler
2.01	2.21	2.00	Total alkaloids, % (DWB)
6.7	7.7	8.1	Total red. sugars, % (DWB)
22	15	20	Reconstituted Tob., %
None	5	None	Expanded Stems, %
11	23	12	Expanded Tob., %
0.749	0.616	0.715	Wt. of Tob., g (12.5% OV)
63.4	59.4	57.9	Rod Length, mm
0.238	0.214	0.248	Rod Density, g/cc

*These cigarette papers are perforated.

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2031438356

LOW TAR 85 MM FILTER CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>Raleigh</u>	<u>Camel</u>	<u>Winston</u>
¹Sales	0.94	3.55	14.14
Smoke			
FTC Tar, mg/cigt.	14.2	14.2	15.1
Nicotine, mg/cigt.	0.91	0.94	1.05
Puffs/cigt.	7.3	8.1	8.2
Filtration Eff., %	45	46	49
Filler Rod TPM, mg/cigt.	28.4	28.1	31.7
CO, mg/cigt.	12.6	13.1	13.8
Cigarette			
Total RTD, mm of H ₂ O	116	106	120
Static Burn. Time, min.	6.8	7.0	7.6
Length, mm	83.9	83.9	84.0
Circumference, mm	25.0	25.0	25.0
PAPER			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.2	0.9	0.4
Permeability, ml/cm ² x min.	43	39	23
Filter			
Type	CA	CA	CA
RTD, mm of H ₂ O	64	68	78
Length, mm	20.9	21.1	21.0
Weight, g	0.12	0.13	0.14
Fiber denier/shape	2.8/Y	3.0/Y	3.6/Y
Tipping Paper			
Length, mm	26.0	25.0	25.0
Color	Cork	Cork	Cork
Ventilation, %	None	12	6
Filler			
Total alkaloide, % (DWB)	2.06	1.84	2.08
Total red. sugars, % (DWB)	7.2	6.6	6.6
Reconstituted Tob., %	11	24	24
Expanded Stems, %	14	None	None
Expanded Tob., %	12	16	16
Wt. of Tob., g (12.5% OV)	0.707	0.710	0.707
Rod Length, mm	63.0	62.8	63.0
Rod Density, g/cc	0.226	0.226	0.225

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2031438357

ULTRA LOW TAR 85 MM FILTER MENTHOL CIGARETTES
(6 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>Now</u>	<u>Carlton</u>	<u>True</u>
Sales	0.26	0.42	0.52
Smoke			
FTC Tar, mg/cigt.	1.5	1.5	5.0
Nicotine, mg/cigt.	0.13	0.14	0.44
Puffs/cigt.	6.3	6.7	8.0
Filtration Eff., %	73	73	55
Filler Rod TFM, mg/cigt.	23.2	22.1	27.0
CO, mg/cigt.	1.8	1.7	5.7
Cigarette			
Total RTD, mm of H ₂ O	112	110	62
Static Burn. Time, min.	5.8	5.6	6.8
Length, mm	84.3	83.0	84.1
Circumference, mm	25.0	25.0	24.9
Paper			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.8	0.7
Permeability, ml/cm ² x min.	37	47	37
Filter			
Type	CA	CA	-
Inner	-	-	CA
Outer	-	-	PL
RTD, mm of H ₂ O	170	148	114
Length, mm	26.9	25.0	24.9
Weight, g	0.20	0.18	0.17
Fiber denier/shape	1.9/Y	1.8/Y	-
Inner	-	-	1.8/Y
Outer	-	-	-
Tipping Paper:			
Length, mm	31.0	30.0	30.0
Color	White	White	White
Ventilation, %	75	73	61
Filler			
Total alkaloide, % (DMB)	2.40	2.31	2.35
Total red. sugars, % (DMB)	4.6	6.2	5.5
Reconstituted Tob., %	15	20	20
Expanded Stems, %	None	None	None
Expanded Tob., %	53	46	14
Wt. of Tob., g (12.8% CV)	(0.470)	0.528	0.664
Red Length, mm	57.4	58.0	59.2
Red Density, g/cc	(0.165)	0.182	0.227
Menthol, mg/cigt.			
Smoke	0.17	0.20	0.20
Filler	3.8	4.7	2.2
Filter	4.9	3.2	1.1

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2031438358

ULTRA LOW TAR 85 MM FILTER MENTHOL CIGARETTES
(6 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

<u>Salem</u> <u>Ultra Lights</u>	<u>Merit</u> <u>Ultra Lights</u>	<u>Kool Ultra</u>	
1.22	0.52	0.26	'Sales
			Smoke
5.5	5.9	*	FTC Tar, mg/cigt.
0.43	0.50	*	Nicotine, mg/cigt.
7.3	8.1	*	Puffs/cigt.
63	64	61	Filtration Eff., %
27.0	29.5	27.2	Filler Rod TPM, mg/cigt.
6.7	6.0	*	CO, mg/cigt.
			Cigarette
116	108	32	Total RTD, mm of H ₂ O
6.8	7.6	6.9	Static Burn. Time, min.
84.1	84.1	83.7	Length, mm
25.0	24.9	24.9	Circumference, mm
			Paper
Cit.	Cit.	Cit.	Component Type
1.6	0.4	0.9	Component Percent
24	32	47	Permeability, ml/cm ² x min.
			Filter
CA	CA	CA	Type
-	-	-	Inner
-	-	-	Outer
130	128	86	RTD, mm of H ₂ O
27.0	27.0	27.1	Length, mm
0.19	0.18	0.19	Weight, g
2.6/Y	2.8/Y	4.0/Y	Fiber denier/shape
-	-	-	Inner
-	-	-	Outer
			Tipping Paper
31.0	32.0	32.0	Length, mm
White	Cork	Cork	Color
51	52	74	Ventilation, %
			Filler
2.10	2.21	2.25	Total alkaloids, % (DWB)
4.9	5.4	6.3	Total red. sugars, % (DWB)
24	22	13	Reconstituted Tob., %
None	None	10	Expanded Stems, %
28	21	11	Expanded Tob., %
0.596	0.608	0.653	Wt. of Tob., g (12.5% OV)
57.1	57.1	56.5	Rod Length, mm
0.210	0.216	0.234	Rod Density, g/cc
			Menthol, mg/cigt.
0.30	0.41	0.09	Smoke
2.5	3.3	1.9	Filler
1.5	2.0	1.2	Filter

*The FTC has determined that the present testing methodology does not accurately measure Brown & Williamson's Barclay and Kool Ultra cigarette smoke deliveries. Data are given on page XII.

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LOW TAR 85 MM FILTER MENTHOL CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>Kool Lights</u>	<u>Merit</u>	<u>Kent Golden Lights</u>	<u>Newport Lights</u>
¹ Sales	0.48	0.56	0.04	0.82
<u>Smoke</u>				
FTC Tar, mg/cigt.	7.7	8.0	8.2	8.5
Nicotine, mg/cigt.	0.68	0.68	0.66	0.73
Puffs/cigt.	7.3	8.3	7.2	7.3
Filtration Eff., %	56	62	51	52
Filler Rod TPM, mg/cigt.	27.4	30.4	27.7	29.5
CO, mg/cigt.	7.9	9.3	7.1	7.5
<u>Cigarette</u>				
Total RTD, mm of H ₂ O	116	127	102	102
Static Burn. Time, min.	7.3	8.0	6.8	6.9
Length, mm	83.7	84.0	84.0	84.2
Circumference, mm	25.0	24.9	25.0	25.0
<u>Paper</u>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.2	0.5	2.1	2.0
Permeability, ml/cm ² x min.	44	45	27	28
<u>Filter</u>				
Type	CA	CA	CA	CA
RTD, mm of H ₂ O	103	120	86	86
Length, mm	26.9	27.0	25.0	25.0
Weight, g	0.17	0.18	0.15	0.15
Fiber denier/shape	2.5/Y	2.6/Y	3.1/Y	2.9/Y
Tipping Paper				
Length, mm	32.0	32.0	32.0	32.0
Color	Cork	Cork	White	Cork
Ventilation, %	35	32	39	34
<u>Filler</u>				
Total alkaloids, % (DWB)	2.28	2.13	2.32	2.30
Total red. sugars, % (DWB)	6.3	6.3	7.5	7.8
Reconstituted Tob., %	13	22	22	22
Expanded Stems, %	10	3	None	None
Expanded Tob., %	11	12	11	11
Wt. of Tob., g (12.5% OV)	0.650	0.672	0.683	0.675
Rod Length, mm	56.8	57.0	59.0	59.1
Rod Density, g/cc	0.231	0.239	0.232	0.230
<u>Menthol, mg/cigt.</u>				
Smoke	0.26	0.45	0.30	0.31
Filler	1.9	2.8	1.9	1.9
Filter	1.5	1.9	1.3	1.3

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2031438360

LOW TAR 85 MM FILTER MENTHOL CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

<u>Salem</u> <u>Lights</u>	<u>Vantage</u>	<u>Marlboro</u> <u>Lights (Box)</u>	
8.64	0.68	0.51	<u>Sales</u>
9.3	9.8	9.7	<u>Smoke</u>
0.69	0.64	0.77	FTC Tar, mg/cigt.
7.1	7.7	7.7	Nicotine, mg/cigt.
58	59	53	Puffs/cigt.
26.0	29.1	26.9	Filtration Eff., %
10.8	11.2	9.3	Filler Rod TYP, mg/cigt.
			CO, mg/cigt.
127	123	107	<u>Cigarette</u>
6.9	7.3	7.3	Total RTD, mm of H ₂ O
84.0	84.0	82.9	Static Burn. Time, min.
25.0	25.1	24.9	Length, mm
			Circumference, mm
Cit.	Cit.	Cit.	<u>Paper</u>
1.0	1.7	0.5	Component Type
40	26	43	Component Percent
			Permeability, ml/cm ² x min.
CA	CA	CA	<u>Filter</u>
111	104	89	Type
26.9	25.1	27.1	RTD, mm of H ₂ O
0.18	0.29	0.17	Length, mm
3.4/Y	1.7/R	3.9/Y	Weight, g
			Fiber denier/shape
31.0	30.0	31.0	Tipping Paper
White	Cork	White	Length, mm
22	28	24	Color
			Ventilation, %
2.03	1.83	2.21	<u>Filler</u>
7.1	7.7	8.4	Total alkaloids, % (DWB)
24	24	22	Total red. sugars, % (DWB)
None	None	None	Reconstituted Tob., %
16	16	15	Expanded Stems, %
0.626	(0.679)	0.642	Expanded Tob., %
57.1	58.9	55.8	Wt. of Tob., g (12.5% OV)
0.220	(0.230)	0.232	Red Length, mm
			Red Density, g/cc
0.38	0.34	0.47	<u>Menthol, mg/cigt.</u>
2.1	2.4	2.3	Smoke
1.7	1.8	1.9	Filler
			Filter

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2031438361

LOW TAR 85 MM FILTER MENTHOL CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>Balair</u>	<u>Kool Milda (Box)</u>	<u>Kool Milda</u>
¹Sales	0.84	0.95	2.77
<u>Smoke</u>			
FTC Tar, mg/cigt.	10.9	11.7	11.8
Nicotine, mg/cigt.	0.79	0.89	0.93
Puffs/cigt.	6.9	7.6	7.6
Filtration Eff., %	49	49	51
Filler Rod TPM, mg/cigt.	27.6	28.3	30.4
CO, mg/cigt.	9.2	10.8	11.8
<u>Cigarette</u>			
Total RTD, mm of H ₂ O	110	119	118
Static Burn. Time, min.	7.0	6.9	7.6
Length, mm	83.6	79.8	84.1
Circumference, mm	25.0	25.0	24.9
<u>PAPER</u>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.3	0.5	0.5
Permeability, ml/cm ² x min.	44	23	24
<u>Filter</u>			
Type	CA	CA	CA
RTD, mm of H ₂ O	77	76	78
Length, mm	26.8	19.0	26.9
Weight, g	0.16	0.12	0.16
Fiber denier/shape	4.0/Y	3.0/Y	3.3/Y
Tipping Paper			
Length, mm	32.0	26.0	32.0
Color	White	Cork	Cork
Ventilation, %	19	21	17
<u>Filler</u>			
Total alkaloids, % (DWB)	2.24	2.26	2.26
Total red. sugars, % (DWB)	6.2	6.4	6.7
Reconstituted Tob., %	11	13	13
Expanded Stems, %	14	10	10
Expanded Tob., %	12	11	11
Wt. of Tob., g (12.5% OV)	0.633	0.701	0.673
Rod Length, mm	56.8	60.8	57.2
Rod Density, g/cc	0.224	0.232	0.238
<u>Menthol, mg/cigt.</u>			
Smoke	0.26	0.48	0.44
Filler	1.3	2.3	2.1
Filter	1.0	1.1	1.4

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2031438362

FULL FLAVORED 85 MM FILTER MENTHOL CIGARETTES
(16 MG TAR OR MORE)
(Brands Ranked by FTC Tar, left to right)

	<u>Marlboro</u>	<u>Kool</u>	<u>Salem</u>	<u>Newport</u>
¹ Sales	0.93	9.64	9.41	6.21
<u>Smoke</u>				
FTC Tar, mg/cigt.	15.5	15.7	15.7	16.3
Nicotine, mg/cigt.	1.08	1.12	1.13	1.18
Puffs/cigt.	8.4	7.4	7.8	7.9
Filtration Eff., %	43	44	46	45
Filler Rod TPM, mg/cigt.	26.5	28.9	27.8	29.6
CO, mg/cigt.	13.4	14.4	14.3	15.9
<u>Cigarette</u>				
Total RTD, mm of H ₂ O	113	111	114	116
Static Burn. Time, min.	7.4	7.1	7.2	7.2
Length, mm	83.9	83.8	84.1	84.1
Circumference, mm	24.9	25.0	25.1	25.0
<u>Paper</u>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.7	0.5	0.7
Permeability, ml/cm ² x min.	47	27	26	18
<u>Filter</u>				
Type	CA	CA	CA	CA
RTD, mm of H ₂ O	63	57	67	64
Length, mm	21.0	20.9	21.0	20.9
Weight, g	0.12	0.12	0.13	0.12
Fiber denier/shape	4.1/Y	4.1/Y	2.7/Y	3.4/Y
Tipping Paper				
Length, mm	25.0	26.0	25.0	25.0
Color	Cork	Cork	White	Cork
Ventilation, %	None	None	None	None
<u>Filler</u>				
Total alkaloids, % (DWB)	2.14	2.46	2.22	2.32
Total red. sugars, % (DWB)	8.4	6.2	6.7	8.2
Reconstituted Tob., %	22	13	24	22
Expanded Stems, %	None	10	None	None
Expanded Tob., %	15	11	16	11
Wt. of Tob., g (12.5% OV)	0.726	0.711	0.704	0.721
Rod Length, mm	62.9	62.9	63.0	63.2
Rod Density, g/cc	0.235	0.228	0.223	0.230
<u>Menthol, mg/cigt.</u>				
Smoke	0.56	0.50	0.56	0.49
Filler	2.0	1.9	2.1	1.6
Filter	1.2	1.0	0.9	0.8

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2031438363

ULTRA LOW TAR 100 MM FILTER CIGARETTES
(6 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>Carlton</u> <u>(Box)</u>	<u>Now</u>	<u>Carlton</u>	<u>Winston</u> <u>Ultra Lights</u>
<u>Sales</u>	1.02	1.77	2.02	1.23
<u>Smoke</u>				
FTC Tar, mg/cigt.	1.5	2.1	3.7	5.3
Nicotine, mg/cigt.	0.13	0.20	0.32	0.42
Puffs/cigt.	8.3	7.4	8.5	8.6
Filtration Eff., %	71	70	62	68
Filler Rod TPM, mg/cigt.	22.2	23.1	23.9	25.0
CO, mg/cigt.	1.1	2.3	3.4	6.4
<u>Cigarette</u>				
Total RTD, mm of H ₂ O	88	94	108	129
Static Burn. Time, min.	5.5	5.4	5.7	6.5
Length, mm	98.7	98.8	99.9	98.9
Circumference, mm	24.5	25.0	24.5	25.0
<u>Paper</u>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	1.0	1.6	0.9	0.9
Permeability, ml/cm ² x min.	47	24	27	38
<u>Filter</u>				
Type	CA	CA	CA	CA
Inner	-	-	-	-
Outer	-	-	-	-
RTD, mm of H ₂ O	123	137	123	158
Length, mm	26.8	29.7	26.9	31.0
Weight, g	0.19	0.20	0.19	0.22
Fiber denier/shape	3.2/I	2.5/Y	3.4/Y	2.5/Y
Inner	-	-	-	-
Outer	-	-	-	-
Tipping Paper				
Length, mm	35.0	35.0	32.0	35.0
Color	White	White	White	Cork
Ventilation, %	78	73	65	49
<u>Filler</u>				
Total alkaloide, % (DWB)	2.30	2.41	2.28	2.07
Total red. sugars, % (DWB)	6.3	4.9	5.5	6.3
Reconstituted Tob., %	20	15	20	24
Expanded Stems, %	None	None	None	None
Expanded Tob., %	46	53	46	25
Wt. of Tob., g. (12.5% OV)	0.634	0.579	0.644	(0.696)
Rod Length, mm	71.8	69.2	73.0	68.0
Rod Density, g/cc	0.185	0.168	0.186	(0.206)

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2031438364

ULTRA LOW TAR 100 MM FILTER CIGARETTES
(6 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

<u>Kent III</u>	<u>Vantage Ultra Lights</u>	<u>Merit Ultra Lights</u>	
1.12	1.69	1.88	¹ Sales
5.5	5.7	5.8	Smoke
0.47	0.46	0.51	FTC Tar, mg/cigt.
8.1	8.8	9.9	Nicotine, mg/cigt.
66	68	67	Puffs/cigt.
28.5	26.4	29.4	Filtration Eff., %
6.5	7.0	6.1	Filler Rod TPM, mg/cigt.
			CO, mg/cigt.
117	126	109	Cigarette
6.0	6.3	7.3	Total RTD, mm of H ₂ O
99.2	98.8	99.6	Static Burn. Time, min.
24.9	25.0	24.9	Length, mm
			Circumference, mm
Cit.	Cit.	Cit.	Paper
2.2	1.7	0.5	Component Type
29	26	31	Component Percent
			Permeability, ml/cm ² x min.
-	CA	CA	Filter
CA	-	-	Type
CA	-	-	Inner
124	148	135	Outer
27.0	30.7	31.3	RTD, mm of H ₂ O
0.16	0.22	0.20	Length, mm
-	2.3/Y	3.0/Y	Weight, g
1.8/Y	-	-	Fiber denier/shape
3.0/Y	-	-	Inner
			Outer
34.0	35.0	36.0	Tipping Paper
White	White	Cork	Length, mm
51	53	53	Color
			Ventilation, %
2.41	2.13	2.27	Filler
6.2	6.0	6.0	Total alkaloids, % (DMB)
15	24	22	Total red. sugars, % (DMB)
None	None	None	Reconstituted Tob., %
25	25	21	Expanded Stems, %
0.714	(0.709)	0.723	Expanded Tob., %
72.2	68.1	68.2	Wt. of Tob., g (12.5% OV)
0.200	(0.209)	0.216	Rod Length, mm
			Rod Density, g/cc

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2031438365

ULTRA LOW TAR 100 MM FILTER CIGARETTES
(6 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>B & W</u> <u>DeLuxe Ultra</u> <u>Lights (Box)</u>	<u>Merit Ultra</u> <u>Lights (Box)</u>	<u>Barclay*</u>
¹Sales	2.42	0.32	0.25
<u>Smoke</u>			
FTC Tar, mg/cigt.	6.1	6.2	*
Nicotine, mg/cigt.	0.49	0.56	*
Puffs/cigt.	8.9	9.2	*
Filtration Eff., %	61	64	60
Filler Rod TPM, mg/cigt.	26.1	27.1	31.7
CO, mg/cigt.	6.1	6.1	*
<u>Cigarette</u>			
Total RTD, mm of H ₂ O	111	106	66
Static Burn. Time, min.	6.8	7.3	7.8
Length, mm	98.3	98.3	98.7
Circumference, mm	24.1	24.1	24.9
<u>PAPER</u>			
Component Type	Cit.	Cit.	Cit.
Component Percent	1.8	0.6	0.5
Permeability, ml/cm ² x min.	50	42	21
<u>Filter</u>			
Type	CA	CA	CA
Inner	-	-	-
Outer	-	-	-
RTD, mm of H ₂ O	129	128	98
Length, mm	31.4	31.4	27.1
Weight, g	0.18	0.19	0.20
Fiber denier/shape	2.8/Y	3.2/Y	3.8/Y
Inner	-	-	-
Outer	-	-	-
Tipping Paper			
Length, mm	36.0	36.0	36.0
Color	White	Cork	Cork
Ventilation, %	52	53	74
<u>Filler</u>			
Total alkaloids, % (DMB)	2.11	2.22	2.13
Total red. sugars, % (DMB)	7.0	5.4	6.3
Reconstituted Tob., %	22	22	14
Expanded Stems, %	3	None	7
Expanded Tob., %	19	21	11
Wt. of Tob., g (12.5% OV)	0.708	0.675	0.862
Rod Length, mm	66.9	66.9	71.6
Rod Density, g/cc	0.229	0.218	0.245

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

*The FTC has determined that the present testing methodology does not accurately measure Brown & Williamson's Barclay and Kool Ultra cigarette smoke deliveries. Data are given on page XII.

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2031438366

LOW TAR 100 MM FILTER CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>True</u>	<u>Vantage</u>	<u>Kent Golden Lights</u>	<u>Ritz (Box)</u>
Sales	0.90	1.99	0.85	0.07
Smoke				
FTC Tar, mg/cigt.	7.9	9.0	9.0	9.3
Nicotine, mg/cigt.	0.70	0.66	0.79	0.75
Puffs/cigt.	9.4	8.9	9.2	8.9
Filtration Eff., %	51	58	52	55
Filler Rod TPM, mg/cigt.	28.7	26.8	28.5	26.8
CO, mg/cigt.	7.9	10.6	8.2	8.8
Cigarette				
Total RTD, mm of H ₂ O	59	138	99	123
Static Burn. Time, min.	6.5	6.8	6.7	6.6
Length, mm	98.8	99.4	99.1	98.2
Circumference, mm	24.9	25.0	24.9	24.2
Paper				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	2.4	1.0	2.2	0.5
Permeability, ml/cm ² x min.	29	39	28	38
Filter				
Type	-	CA	CA	CA
Inner	CA	-	-	-
Outer	PL	-	-	-
RTD, mm of H ₂ O	70	120	86	103
Length, mm	26.9	27.5	26.9	31.0
Weight, g	0.16	0.30	0.15	0.19
Fiber denier/shape	-	2.6/Y	3.1/Y	4.0/Y
Inner	1.8/Y	-	-	-
Outer	-	-	-	-
Tipping Paper				
Length, mm	34.0	34.0	34.0	35.0
Color	White	Cork	White	White
Ventilation, %	55	36	45	33
Filler				
Total alkaloids, % (DMB)	3.36	1.87	2.34	2.05
Total red. sugars, % (DMB)	5.2	6.0	7.7	7.4
Reconstituted Tob., %	20	24	22	24
Expanded Stems, %	None	None	None	None
Expanded Tob., %	14	20	11	16
Wt. of Tob., g (12.5% OV)	0.818	0.771	0.817	(0.694)
Rod Length, mm	71.9	71.9	72.2	67.2
Rod Density, g/cc	0.230	0.216	0.229	(0.222)

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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LOW TAR 100 MM FILTER CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>Marl</u>	<u>Winston</u> <u>Lts. (Box)</u>	<u>Camel</u> <u>Lights</u>	<u>Winston</u> <u>Lights</u>
<u>Sales</u>	2.79	0.32	0.97	4.40
<u>Smoke</u>				
FTC Tar, mg/cigt.	10.0	10.4	10.6	10.6
Nicotine, mg/cigt.	0.81	0.72	0.75	0.76
Puffs/cigt.	9.9	9.3	9.0	9.3
Filtration Eff., %	60	60	56	57
Filler Rod TPM, mg/cigt.	28.8	28.2	27.1	27.5
CO, mg/cigt.	10.1	11.4	11.7	10.9
<u>Cigarette</u>				
Total RTD, mm of H ₂ O	117	150	117	121
Static Burn. Time, min.	7.8	7.3	7.2	7.3
Length, mm	99.6	98.1	98.8	98.7
Circumference, mm	25.0	24.2	25.0	25.0
<u>PAPER</u>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.6	0.6	0.5
Permeability, ml/cm ² x min.	44	38	37	38
<u>Filter</u>				
Type	CA	CA	CA	CA
RTD, mm of H ₂ O	105	122	95	96
Length, mm	31.4	31.0	30.7	30.8
Weight, g	0.19	0.19	0.18	0.18
Fiber denier/shape	2.6/Y	3.1/Y	2.6/Y	2.6/Y
Tipping Paper				
Length, mm	36.0	35.0	35.0	35.0
Color	Cork	Cork	Cork	Cork
Ventilation, %	32	20	28	27
<u>Filler</u>				
Total alkaloids, % (DWB)	2.12	1.79	1.79	1.80
Total red. sugars, % (DWB)	6.6	7.3	6.8	6.9
Reconstituted Tob., %	22	24	24	24
Expanded Stems, %	3	None	None	None
Expanded Tob., %	12	16	16	16
Wt. of Tob., g (12.5% OV)	0.804	0.740	0.772	0.774
Rod Length, mm	68.2	67.2	68.2	67.9
Rod Density, g/cc	0.238	0.236	0.228	0.230

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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LOW TAR 100 MM FILTER CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

B & W		Marlboro	
Lts. (Box)	Satin	Lts. (Box)	
0.21	0.12	3.76	1 Sales
			Smoke
10.7	10.8	11.0	FTC Tar, mg/cigt.
0.85	0.88	0.88	Nicotine, mg/cigt.
9.4	8.8	10.1	Puffs/cigt.
51	53	59	Filtration Eff., %
26.9	27.1	30.1	Filler Rod TPM, mg/cigt.
10.2	1.6	11.1	CO, mg/cigt.
			Cigarette
123	121	120	Total RTD, mm of H ₂ O
7.4	6.7	8.1	Static Burn. Time, min.
98.4	99.0	98.5	Length, mm
24.1	24.9	25.0	Circumference, mm
			Paper
Cit.	Cit.	Cit.	Component Type
0.4	2.0	0.6	Component Percent
45	30	33	Permeability, ml/cm ² x min.
			Filter
CA	CA	CA	Type
103	88	107	RTD, mm of H ₂ O
31.6	26.9	31.4	Length, mm
0.19	0.15	0.19	Weight, g
2.6/Y	2.6/Y	3.0/Y	Fiber denier/shape
			Tipping Paper
36.0	34.0	36.0	Length, mm
White	White	White	Color
28	26	28	Ventilation, %
			Filler
2.10	2.35	2.13	Total alkaloids, % (DMB)
7.1	7.1	7.4	Total red. sugars, % (DMB)
22	22	22	Reconstituted Tob., %
3	None	3	Expanded Stems, %
12	11	12	Expanded Tob., %
0.746	0.816	0.798	Wt. of Tob., g (12.5% OV)
66.8	72.1	67.1	Rod Length, mm
0.242	0.230	0.240	Rod Density, g/cc

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LOW TAR 100 MM FILTER CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>B & W</u> <u>Light</u>	<u>Marlboro</u> <u>Light</u>	<u>Kent</u>
¹ Sales	1.89	7.30	1.32
Smoke			
FTC Tar, mg/cigt.	11.1	11.2	12.7
Nicotine, mg/cigt.	0.88	0.89	0.93
Puffs/cigt.	10.2	10.3	9.4
Filtration Eff., %	98	99	90
Filler Rod TFM, mg/cigt.	31.5	30.4	28.5
CO, mg/cigt.	11.0	11.3	12.0
Cigarette			
Total RTD, mm of H ₂ O	122	124	121
Static Burn. Time, min.	7.8	8.0	6.9
Length, mm	99.5	99.5	98.6
Circumference, mm	25.0	24.9	24.9
Paper			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.6	0.5	0.8
Permeability, ml/cm ² x min.	34	37	38
Filter			
Type	CA	CA	CA
RTD, mm of H ₂ O	107	108	72
Length, mm	31.2	31.4	26.7
Weight, g	0.19	0.19	0.16
Fiber denier/shape	2.6/Y	2.8/Y	4.6/Y
Tipping Paper			
Length, mm	36.0	36.0	34.0
Color	White	White	White
Ventilation, %	30	29	20
Filler			
Total alkaloids, % (DNB)	2.12	2.13	2.04
Total red. sugars, % (DNB)	7.1	7.1	6.3
Reconstituted Tob., %	22	22	22
Expanded Stems, %	3	3	None
Expanded Tob., %	12	12	11
Wt. of Tob., g (12.56 OV)	0.808	0.812	0.844
Rod Length, mm	68.3	68.1	71.8
Rod Density, g/cc	0.238	0.241	0.238

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1969.

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LOW TAR 100 MM FILTER CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

<u>Raleigh</u> <u>lights</u>	<u>L & M</u>	<u>Raleigh</u>	
0.21	0.20	0.74	Sales
12.8	12.8	14.3	Smoke
0.96	1.00	0.92	FTC Tar, mg/cigt.
9.4	8.1	8.3	Nicotine, mg/cigt.
58	48	47	Puffs/cigt.
30.3	24.2	25.0	Filtration Eff., %
13.4	12.9	14.6	Filler Rod TPM, mg/cigt.
			CO, mg/cigt.
			Cigarette
136	121	124	Total RTD, mm of H ₂ O
7.3	6.5	6.6	Static Burn. Time, min.
99.0	98.5	98.8	Length, mm
24.9	24.7	24.9	Circumference, mm
			Paper
Cit.	Cit.	Cit.	Component Type
0.9	1.5	0.3	Component Percent
46	120*	44	Permeability, ml/cm ² x min.
			Filter
CA	CA	CA	Type
102	68	64	RTD, mm of H ₂ O
29.9	29.7	26.7	Length, mm
0.18	0.17	0.15	Weight, g
3.5/Y	3.4/Y	3.8/Y	Fiber denier/shape
			Tipping Paper
36.0	35.0	32.0	Length, mm
Cork	White	Cork	Color
16	None	None	Ventilation, %
			Filler
2.07	2.22	2.07	Total alkaloids, % (DWB)
6.5	7.8	6.3	Total red. sugars, % (DWB)
16	15	11	Reconstituted Tob., %
5	5	14	Expanded Stems, %
None	23	12	Expanded Tob., %
0.844	0.716	0.802	Wt. of Tob., g (12.5% OV)
69.1	69.8	72.1	Rod Length, mm
0.248	0.214	0.226	Rod Density, g/cc

*These cigarette papers are perforated.

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FULL FLAVORED 100 MM FILTER CIGARETTES
(16 MG TAR OR MORE)
(Brands Ranked by FTC Tar, left to right)

	<u>B & W</u>	<u>Winston</u>	<u>Marlboro</u>	<u>Pall Mall</u>
<u>Sales</u>	3.09	5.02	6.45	1.71
<u>Smoke</u>				
FTC Tar, mg/cigt.	15.7	16.1	16.5	16.6
Nicotine, mg/cigt.	1.15	0.98	1.19	1.21
Puffs/cigt.	10.4	9.6	10.7	9.9
Filtration Eff., %	50	52	50	47
Filler Rod TFM, mg/cigt.	28.4	28.4	30.2	25.9
CO, mg/cigt.	14.0	16.5	13.5	14.8
<u>Cigarette</u>				
Total RTD, mm of H ₂ O	115	130	119	138
Static Burn. Time, min.	7.8	7.2	7.7	7.6
Length, mm	99.4	99.4	99.7	99.8
Circumference, mm	24.9	25.0	24.9	24.5
<u>Paper</u>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.6	0.5	0.6	0.9
Permeability, ml/cm ² x min.	45	23	32	46
<u>Filter</u>				
Type	CA	CA	CA	CA
RTD, mm of H ₂ O	75	76	77	65
Length, mm	27.4	27.5	27.5	26.7
Weight, g	0.16	0.17	0.16	0.16
Fiber denier/shape	3.6/Y	3.8/Y	3.7/Y	4.2/Y
Tipping Paper				
Length, mm	32.0	32.0	31.5	32.0
Color	White	Cork	Cork	White
Ventilation, %	14	8	12	None
<u>Filler</u>				
Total alkaloids, % (DMB)	2.10	1.74	2.09	2.15
Total red. sugars, % (DMB)	6.7	7.3	7.3	8.4
Reconstituted Tob., %	22	24	22	20
Expanded Stems, %	3	None	3	3
Expanded Tob., %	12	16	12	11
Wt. of Tob., g (12.5% OV)	0.862	0.813	0.858	0.883
Rod Length, mm	72.1	72.0	72.3	73.1
Rod Density, g/cc	0.242	0.227	0.241	0.254

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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120 MM FILTER CIGARETTES
(Brands Ranked by FTC Tar, left to right)

	Carlton	Virginia Slime Lights (Box)	Saratoga (Box)	More
¹ Sales	0.43	1.22	0.54	1.45
Smoke				
FTC Tar, mg/cigt.	5.5	13.2	14.9	17.3
Nicotine, mg/cigt.	0.51	1.02	1.17	1.24
Puffs/cigt.	11.7	12.6	13.0	12.5
Filtration Eff., %	43	51	52	49
Filler Rod TPM, mg/cigt.	19.5	27.3	29.4	33.0
CO, mg/cigt.	4.0	12.8	12.8	20.9
Cigarette				
Total RTD, mm of H ₂ O	100	134	133	166
Static Burn. Time, min.	6.4	7.5	7.8	8.4
Length, mm	119.6	119.7	119.8	119.8
Circumference, mm	22.3	23.0	23.1	21.1
Paper				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.9	0.5	0.5	0.4
Color	White	White	White	Brown
Permeability, ml/cm ² x min.	45	43	26	15
Filter				
Type	CA	CA	CA	CA
RTD, mm of H ₂ O	84	100	96	119
Length, mm	29.6	31.5	31.6	35.0
Weight, g	0.14	0.16	0.16	0.16
Fiber denier/shape	4.8/Y	3.4/Y	3.0/Y	4.7/Y
Tipping Paper				
Length, mm	35.0	36.0	36.0	39.0
Color	White	White	Cork	Brown
Ventilation, %	65	28	28	31
Filler				
Total alkaloids, % (DWB)	2.32	2.11	2.13	1.99
Total red. sugars, % (DWB)	6.8	7.3	7.3	6.7
Reconstituted Tob., %	20	22	22	24
Expanded Stems, %	None	3	3	None
Expanded Tob., %	34	12	12	16
Wt. of Tob., g (12.5% OV)	0.781	0.914	0.917	0.720
Rod Length, mm	89.9	88.2	88.2	84.8
Rod Density, g/cc	0.219	0.246	0.244	0.240

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ULTRA LOW TAR 100 MM FILTER MENTHOL CIGARETTES
(6 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>Now</u>	<u>Salem</u> <u>Ultra Lights</u>	<u>Merit</u> <u>Ultra Lights</u>
¹Sales	0.99	1.76	0.47
<u>Smoke</u>			
FTC Tar, mg/cigt.	3.3	5.4	5.4
Nicotine, mg/cigt.	0.26	0.42	0.49
Puffs/cigt.	7.3	9.4	10.5
Filtration Eff., %	68	67	66
Filler Rod TPM, mg/cigt.	22.5	26.9	27.7
CO, mg/cigt.	3.3	6.5	6.9
<u>Cigarette</u>			
Total RTD, mm of H ₂ O	102	114	104
Static Burn. Time, min.	5.3	6.8	7.6
Length, mm	98.9	98.8	99.4
Circumference, mm	25.1	25.0	24.9
<u>PAK</u>			
Component Type	Cit.	Cit.	Cit.
Component Percent	1.6	2.0	0.5
Permeability, ml/cm ² x min.	26	29	27
<u>Filter</u>			
Type	CA	CA	CA
RTD, mm of H ₂ O	138	152	135
Length, mm	31.0	31.0	31.5
Weight, g	0.21	0.22	0.20
Fiber denier/shape	2.9/Y	2.5/Y	3.0/Y
Tipping Paper			
Length, mm	35.0	35.0	36.0
Color	White	White	Cork
Ventilation, %	66	57	59
<u>Filler</u>			
Total alkaloide, % (DWB)	2.39	1.98	2.24
Total red. sugars, % (DWB)	4.6	8.6	5.8
Reconstituted Tob., %	15	24	22
Expanded Stems, %	None	None	None
Expanded Tob., %	53	16	21
Wt. of Tob., g (12.5% OV)	(0.572)	(0.769)	0.737
Rod Length, mm	67.9	67.8	67.9
Rod Density, g/cc	(0.168)	(0.228)	0.220
<u>Menthol, mg/cigt.</u>			
Smoke	0.32	0.29	0.47
Filler	4.8	3.3	4.0
Filter	3.2	2.0	2.5

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ULTRA LOW TAR 100 MM FILTER MENTHOL CIGARETTES
(6 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

<u>B & W</u> <u>Deluxe Ultra</u> <u>Lights (Box)</u>	<u>Kool Ultra*</u>	
1.72	0.29	<u>Sales</u>
5.5	*	<u>Smoke</u>
0.43	*	FTC Tar, mg/cigt.
9.1	*	Nicotine, mg/cigt.
62	57	Puffs/cigt.
29.3	24.1	Filtration Eff., %
6.1	*	Filler Rod TPM, mg/cigt.
		CO, mg/cigt.
		<u>Cigarette</u>
119	57	Total RTD, mm of H ₂ O
6.8	6.6	Static Burn. Time, min.
98.4	98.8	Length, mm
24.1	24.9	Circumference, mm
		<u>Parax</u>
Cit.	Cit.	Component Type
1.1	0.9	Component Percent
46	47	Permeability, ml/cm ² x min.
		<u>Filter</u>
CA	CA	Type
141	86	RTD, mm of H ₂ O
31.4	27.0	Length, mm
0.19	0.20	Weight, g
3.0/Y	4.0/Y	Fiber denier/shape
		Tipping Paper
36.0	36.0	Length, mm
White	Cork	Color
88	60	Ventilation, %
		<u>Filler</u>
2.08	2.25	Total alkaloids, % (DWB)
6.8	6.3	Total red. sugars, % (DWB)
22	13	Reconstituted Tob., %
3	10	Expanded Stems, %
19	11	Expanded Tob., %
0.721	0.818	Wt. of Tob., g (12.5% OV)
67.1	73.7	Rod Length, mm
0.233	0.231	Rod Density, g/cc
		<u>Menthol, mg/cigt.</u>
0.41	0.22	Smoke
3.5	2.9	Filler
1.9	1.4	Filter

*The FTC has determined that the present testing methodology does not accurately measure Brown & Williamson's Barclay and Kool Ultra cigarette smoke deliveries. Data are given on page XII.

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2031438375

LOW TAR 100 MM FILTER MENTHOL CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>Salem</u> <u>Lights</u>	<u>Relax</u>	<u>True</u>	<u>Kool</u> <u>Lights</u>
Sales	4.36	0.69	0.49	0.41
Smoke				
FTC Tar, mg/cigt.	8.2	8.3	8.6	8.6
Nicotine, mg/cigt.	0.69	0.63	0.73	0.75
Puffs/cigt.	9.3	8.8	9.2	9.2
Filtration Eff., %	60	49	50	57
Filter Rod TPM, mg/cigt.	27.8	23.1	27.1	29.1
CO, mg/cigt.	8.6	8.0	8.6	8.9
Cigarette				
Total RTD, mm of H ₂ O	113	106	87	118
Static Burn. Time, min.	6.8	6.6	6.4	7.1
Length, mm	98.8	98.7	98.8	98.8
Circumference, mm	25.0	24.9	25.0	24.9
PADAX				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.3	2.1	0.5
Permeability, ml/cm ² x min.	39	43	29	22
Filter				
Type	CA	CA	-	CA
Inner	-	-	CA	-
Outer	-	-	PL	-
RTD, mm of H ₂ O	119	77	69	102
Length, mm	31.0	30.0	26.8	28.8
Weight, g	0.19	0.17	0.16	0.17
Fiber denier/shape	2.4/Y	3.6/Y	-	3.4/Y
Inner	-	-	1.8/Y	-
Outer	-	-	-	-
Tipping Paper				
Length, mm	35.0	36.0	34.0	36.0
Color	White	White	White	Cork
Ventilation, %	41	37	55	38
Filler				
Total alkaloids, % (DWB)	2.02	1.95	2.31	2.19
Total red. sugars, % (DWB)	7.3	6.4	5.9	7.0
Reconstituted Tob., %	24	11	20	13
Expanded Stems, %	None	14	None	10
Expanded Tob., %	16	12	14	11
Wt. of Tob., g (12.5% OV)	0.740	0.772	0.817	0.794
Rod Length, mm	67.9	68.8	72.1	70.0
Rod Density, g/cc	0.219	0.228	0.229	0.230
Menthol, mg/cigt.				
Smoke	0.38	0.31	0.44	0.32
Filler	2.9	2.1	3.0	2.6
Filter	1.4	1.2	1.0	1.5

Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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LOW TAR 100 MM FILTER MENTHOL CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

<u>Vantage</u>	<u>Newport</u> <u>Lights</u>	<u>Merit</u>	<u>Kent</u> <u>Golden</u> <u>Lights</u>	
0.21	0.23	0.49	0.10	¹ Sales
				Smokes
8.9	8.9	9.2	9.2	FTC Tar, mg/cigt.
0.65	0.82	0.78	0.82	Nicotine, mg/cigt.
8.6	9.0	9.6	9.2	Puffs/cigt.
62	53	58	54	Filtration Eff., %
26.9	28.0	28.0	27.8	Filler Rod TPM, mg/cigt.
10.8	6.9	10.6	8.5	CO, mg/cigt.
				Cigarette
138	102	118	108	Total RTD, mm of H ₂ O
6.5	6.8	6.8	6.5	Static Burn. Time, min.
99.1	98.7	99.4	98.8	Length, mm
25.0	24.9	24.8	24.9	Circumference, mm
				Paper
Cit.	Cit.	Cit.	Cit.	Component Type
0.9	2.0	1.9	2.1	Component Percent
39	32	47	30	Permeability, ml/cm ² x min.
				Filter
CA	CA	CA	CA	Type
-	-	-	-	Inner
-	-	-	-	Outer
132	86	109	87	RTD, mm of H ₂ O
31.0	26.8	31.5	26.8	Length, mm
0.33	0.16	0.19	0.15	Weight, g
2.4/Y	2.8/Y	3.2/Y	3.0/Y	Fiber denier/shape
-	-	-	-	Inner
-	-	-	-	Outer
				Tipping Paper
35.0	34.0	36.0	34.0	Length, mm
Cork	Cork	Cork	White	Color
32	42	34	41	Ventilation, %
				Filler
1.80	2.28	2.11	2.30	Total alkaloids, % (DWB)
7.3	7.7	6.1	8.1	Total red. sugars, % (DWB)
24	22	22	22	Reconstituted Tob., %
None	None	3	None	Expanded Stems, %
16	11	12	11	Expanded Tob., %
0.751	0.826	0.803	0.824	Wt. of Tob., g (12.5% OV)
68.1	71.8	67.9	72.0	Rod Length, mm
0.221	0.233	0.242	0.233	Rod Density, g/cc
				Menthol, mg/cigt.
0.37	0.33	0.54	0.40	Smoke
3.0	2.3	3.4	2.5	Filler
1.9	1.2	2.2	1.2	Filter

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LOW TAR 100 MM FILTER MENTHOL CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

	<u>Marlboro</u> <u>Lights (Box)</u>	<u>B & W</u> <u>Lights (Box)</u>	<u>B & W</u> <u>Lights</u>
Sales	0.40	0.19	1.67
Smoke			
FTC Tar, mg/cigt.	9.7	10.4	10.4
Nicotine, mg/cigt.	0.78	0.78	0.83
Puffs/cigt.	9.2	8.6	10.2
Filtration Eff., %	54	51	57
Filler Rod TPM, mg/cigt.	25.0	26.0	30.6
CO, mg/cigt.	10.2	10.9	10.1
Cigarette			
Total RTD, mm of H ₂ O	123	119	117
Static Burn. Time, min.	7.9	7.2	7.7
Length, mm	98.4	98.3	99.6
Circumference, mm	25.0	24.1	24.9
PAPER			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.6	1.6	0.4
Permeability, ml/cm ² x min.	48	50	46
Filter			
Type	CA	CA	CA
RTD, mm of H ₂ O	103	102	107
Length, mm	31.4	31.4	31.4
Weight, g	0.19	0.19	0.19
Fiber denier/shape	3.9/Y	3.3/Y	2.6/Y
Tipping Paper			
Length, mm	36.0	36.0	36.0
Color	White	White	White
Ventilation, %	26	28	32
Filler			
Total alkaloids, % (DWB)	2.18	2.07	2.08
Total red. sugars, % (DWB)	8.0	6.5	7.0
Reconstituted Tob., %	22	22	22
Expanded Stems, %	None	3	3
Expanded Tob., %	15	12	12
Wt. of Tob., g (12.5% OV)	0.774	0.753	0.813
Rod Length, mm	67.0	66.9	68.2
Rod Density, g/cc	0.232	0.244	0.241
Menthol, mg/cigt.			
Smoke	0.53	0.56	0.60
Filler	2.8	3.1	3.5
Filter	2.1	1.5	2.5

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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LOW TAR 100 MM FILTER MENTHOL CIGARETTES
(15 MG TAR OR LESS)
(Brands Ranked by FTC Tar, left to right)

<u>Satin</u>	<u>Ritz (Box)</u>	<u>Salem</u>	
0.08	0.10	3.59	¹ Sales
			<u>Smoke</u>
10.8	11.1	15.3	FTC Tar, mg/cigt.
0.92	0.81	1.10	Nicotine, mg/cigt.
8.5	9.2	9.7	Puffs/cigt.
50	52	48	Filtration Eff., %
28.0	27.5	28.8	Filler Rod TPM, mg/cigt.
10.8	11.6	13.5	CO, mg/cigt.
			<u>Cigarette</u>
118	118	109	Total RTD, mm of H ₂ O
6.7	7.6	7.2	Static Burn. Time, min.
98.8	98.3	99.4	Length, mm
25.0	24.2	25.0	Circumference, mm
			<u>PAPER</u>
Cit.	Cit.	Cit.	Component Type
1.8	0.9	0.5	Component Percent
29	37	26	Permeability, ml/cm ² x min.
			<u>Filter</u>
CA	CA	CA	Type
85	96	70	RTD, mm of H ₂ O
26.8	30.9	27.2	Length, mm
0.15	0.18	0.16	Weight, g
2.6/Y	4.2/Y	3.5/Y	Fiber denier/shape
			Tipping Paper
34.0	35.0	32.0	Length, mm
White	White	White	Color
26	28	20	Ventilation, %
			<u>Filler</u>
2.34	1.81	2.01	Total alkaloids, % (DWB)
6.9	6.7	7.4	Total red. sugars, % (DWB)
22	24	24	Reconstituted Tob., %
None	None	None	Expanded Stems, %
11	16	16	Expanded Tob., %
0.824	(0.732)	0.829	Wt. of Tob., g (12.5% OV)
72.0	67.4	72.2	Rod Length, mm
0.231	(0.233)	0.230	Rod Density, g/cc
			<u>Menthol, mg/cigt.</u>
0.39	0.67	0.45	Smoke
2.3	3.7	2.3	Filler
1.3	1.9	1.1	Filter

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FULL FLAVORED 100 MM FILTER MENTHOL CIGARETTES
(16 MG TAR OR MORE)
(Brands Ranked by FTC Tar, left to right)

	<u>B & W</u>	<u>Kool</u>	<u>Newport</u>
¹ Sales	3.36	3.55	2.22
<u>Smoke</u>			
FTC Tar, mg/cigt.	15.7	16.0	17.3
Nicotine, mg/cigt.	1.16	1.21	1.26
Puffs/cigt.	10.3	8.7	8.8
Filtration Eff., %	51	48	45
Filler Rod TPM, mg/cigt.	29.3	26.9	30.0
CO, mg/cigt.	13.4	15.8	16.6
<u>Cigarette</u>			
Total RTD, mm of H ₂ O	119	123	125
Static Burn. Time, min.	7.9	7.0	7.3
Length, mm	99.4	98.9	98.8
Circumference, mm	24.9	24.9	24.9
<u>Paper</u>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.4	0.7
Permeability, ml/cm ² x min.	47	45	20
<u>Filter</u>			
Type	CA	CA	CA
RTD, mm of H ₂ O	74	69	63
Length, mm	27.2	26.6	26.8
Weight, g	0.16	0.15	0.17
Fiber denier/shape	3.7/Y	3.8/Y	4.6/Y
Tipping Paper			
Length, mm	32.0	32.0	34.0
Color	White	Cork	Cork
Ventilation, %	12	None	None
<u>Filler</u>			
Total alkaloids, % (DWB)	2.09	2.49	2.30
Total red. sugars, % (DWB)	7.1	6.3	7.8
Reconstituted Tob., %	22	13	22
Expanded Stems, %	3	10	None
Expanded Tob., %	12	11	11
Wt. of Tob., g (12.5% OV)	0.855	0.812	0.826
Rod Length, mm	72.2	72.2	72.0
Rod Density, g/cc	0.239	0.228	0.232
<u>Menthol, mg/cigt.</u>			
Smoke	0.69	0.46	0.47
Filler	3.0	2.2	1.9
Filter	1.4	1.0	1.0

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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120 MM FILTER MENTHOL CIGARETTES
(Brands Ranked by FTC Tar, left to right)

	<u>Carlton</u>	<u>Virginia Slims Lights (Box)</u>	<u>Saratoga (Box)</u>	<u>Moré</u>
<u>Sales</u>	0.42	0.91	0.25	1.25
<u>Smoke</u>				
FTC Tar, mg/cigt.	5.6	13.6	14.7	17.0
Nicotine, mg/cigt.	0.94	1.03	1.11	1.27
Puffs/cigt.	11.4	12.6	13.2	12.3
Filtration Eff., %	43	51	50	49
Filler Rod TPM, mg/cigt.	20.1	26.5	26.9	33.0
CO, mg/cigt.	4.8	11.8	13.9	19.4
<u>Cigarette</u>				
Total RTD, mm of H ₂ O	89	130	139	160
Static Burn. Time, min.	5.9	7.8	7.2	8.1
Length, mm	119.6	119.4	119.1	119.7
Circumference, mm	22.3	23.1	23.0	21.1
<u>LABEX</u>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.9	0.3	0.5	0.9
Color	White	White	White	Brown
Permeability, ml/cm ² x min.	51	45	34	15
<u>Filter</u>				
Type	CA	CA	CA	CA
RTD, mm of H ₂ O	84	98	102	118
Length, mm	29.8	31.5	31.5	35.0
Weight, g	0.15	0.16	0.16	0.16
Fiber denier/shape	4.8/Y	3.6/Y	3.0/Y	4.9/Y
Tipping Paper				
Length, mm	35.0	36.0	36.0	39.0
Color	White	White	Cork	Brown
Ventilation, %	67	28	28	32
<u>Filler</u>				
Total alkaloids, % (DWB)	2.34	2.07	2.10	2.17
Total red. sugars, % (DWB)	5.6	7.2	6.9	7.1
Reconstituted Tob., %	20	22	22	24
Expanded Stems, %	None	3	3	None
Expanded Tob., %	34	12	12	16
Wt. of Tob., g (12.5% OV)	0.759	0.917	0.923	0.716
Rod Length, mm	89.8	87.9	87.6	84.7
Rod Density, g/cc	0.213	0.246	0.250	0.239
<u>Menthol, mg/cigt.</u>				
Smoke	0.50	0.63	0.60	0.63
Filler	4.8	3.3	3.4	2.7
Filter	1.5	1.8	1.3	0.9

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100 MM FILTER SLIM CIGARETTES
(Brands Ranked by FTC Tar, left to right)

	Virginia Slime Ultra Lights (Box)	Virginia Slime Lights (Box)	Capri (Box)	More Lights (Box)	Virginia Slime
¹ Sales	1.05	1.82	1.00	0.21	1.95
Smoke					
FTC Tar, mg/cigt.	6.0	8.3	9.3	10.1	14.0
Nicotine, mg/cigt.	0.49	0.70	0.76	0.76	1.02
Puffs/cigt.	9.4	9.6	9.1	9.2	9.8
Filtration Eff., %	58	54	31	50	45
Filler Rod TPM, mg/cigt.	25.6	26.4	21.5	26.3	26.2
CO, mg/cigt.	5.7	7.6	5.7	9.5	11.1
Cigarette					
Total RTD, mm of H ₂ O	113	117	144	116	122
Static Burn. Time, min.	6.8	7.1	7.4	7.4	7.6
Length, mm	98.7	98.8	97.1	98.0	99.6
Circumference, mm	23.0	23.1	17.2	22.8	23.1
PAPER					
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.5	0.3	1.0	0.6
Permeability, ml/cm ² x min.	48	45	26	39	46
Filter					
Type	CA	CA	CA	CA	CA
RTD, mm of H ₂ O	141	117	111	102	83
Length, mm	31.5	31.5	26.9	30.8	27.5
Weight, g	0.17	0.17	0.08	0.15	0.15
Fiber denier/shape	3.3/Y	3.1/Y	5.7/Y	3.4/Y	3.5/Y
Tipping Paper					
Length, mm	36.0	36.0	32.0	35.0	32.0
Color	White	White	White	Deep Tan	White
Ventilation, %	57	40	53	40	17
Filler					
Total alkaloide, % (DWB)	2.09	2.08	2.14	1.92	2.13
Total red. sugars, % (DWB)	6.7	6.9	6.8	6.0	6.8
Reconstituted Tob., %	22	22	19	24	22
Expanded Stems, %	3	3	None	None	3
Expanded Tob., %	19	12	None	16	12
Wt. of Tob., g (12.5% OV)	0.657	0.684	0.436	0.649	0.738
Rod Length, mm	67.1	67.3	70.2	67.2	72.1
Rod Density, g/cc	0.232	0.239	0.265	0.234	0.242

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2031438382

100 MM FILTER SLIM MENTHOL CIGARETTES
 (Brands Ranked by FTC Tar, left to right)

	Virginia Slims Lts. (Box)	Salem Ultra Slims (Box)	Capri Lts. (Box)	Virginia Slims Lts. (Box)	More Lights (Box)	Virginia Slims (Box)
¹Sales	0.90	1.68	0.87	2.02	0.18	1.62
<u>Smoke</u>						
FTC Tar, mg/cigt.	5.6	8.9	8.9	8.9	9.0	14.4
Nicotine, mg/cigt.	0.46	0.69	0.71	0.72	0.66	1.04
Puffs/cigt.	8.9	8.4	9.2	9.4	8.9	9.8
Filtration Eff., %	58	50	31	54	48	44
Filler Rod TPM, mg/cigt.	25.0	24.6	18.4	25.4	25.8	26.4
CO, mg/cigt.	4.9	8.9	5.5	7.7	10.3	12.3
<u>Cigarette</u>						
Total RTD, mm of H ₂ O	107	116	162	120	104	124
Static Burn. Time, min.	6.7	6.8	7.3	7.2	7.5	7.2
Length, mm	98.6	98.0	97.2	98.6	97.9	99.5
Circumference, mm	23.0	22.7	17.1	23.1	22.7	23.1
<u>Paper</u>						
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	2.3	0.8	0.3	0.4	0.9	0.4
Permeability, ml/cm ² x min.	45	39	25	45	35	43
<u>Filter</u>						
Type	CA	CA	CA	CA	CA	CA
RTD, mm of H ₂ O	130	98	113	114	100	80
Length, mm	31.5	30.8	26.9	31.5	30.8	27.5
Weight, g	0.17	0.15	0.07	0.17	0.15	0.15
Fiber denier/shape	3.3/Y	3.4/Y	5.7/Y	3.2/Y	3.2/Y	3.4/Y
Tipping Paper						
Length, mm	36.0	35.0	32.0	36.0	35.0	32.0
Color	White	White	White	White	Deep Tan	White
Ventilation, %	56	38	52	38	42	18
<u>Filler</u>						
Total alkaloids, % (DMB)	2.04	1.97	1.92	2.10	1.81	2.08
Total red. sugars, % (DMB)	6.8	7.6	6.3	7.0	6.9	7.1
Reconstituted Tob., %	22	24	11	22	24	22
Expanded Stems, %	3	None	None	3	None	3
Expanded Tob., %	19	20	None	12	16	12
Wt. of Tob., g (12.5% OV)	0.656	0.635	0.432	0.684	(0.639)	1.748
Rod Length, mm	67.0	67.3	70.3	67.1	67.2	72.0
Rod Density, g/cc	0.231	0.231	0.264	0.240	(0.232)	0.245
<u>Menthol, mg/cigt.</u>						
Smoke	0.41	0.56	0.64	0.56	0.59	0.64
Filler	3.2	3.2	2.9	3.2	3.1	2.8
Filter	2.0	1.7	0.9	1.8	1.5	1.2

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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85 MM CHARCOAL FILTER CIGARETTES
(Brands Ranked by FTC Tar, left to right)

	<u>Tareyton</u> <u>Lights</u>	<u>B & W</u> <u>Multifilter</u>	<u>Lark</u> <u>Lights</u>	<u>Tareyton</u>
¹ Sales	0.07	0.13	0.24	1.28
Smoke				
FTC Tar, mg/cigt.	5.8	11.5	11.7	12.9
Nicotine, mg/cigt.	0.43	0.87	0.91	0.90
Puffs/cigt.	7.2	9.2	6.9	8.5
Filtration Eff., %	54	48	46	52
Filler Rod TPM, mg/cigt.	23.3	32.1	23.8	26.9
Gas Phase Smoke Index,				
% Reduction	59	44	22	21
CO, mg/cigt.	5.3	10.4	9.6	14.0
Cigarette				
Total RTD, mm of H ₂ O	95	89	108	125
Static Burn. Time, min.	6.2	8.4	6.6	7.0
Length, mm	84.8	83.9	84.3	83.1
Circumference, mm	25.0	24.9	24.8	25.0
Paper				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.8	0.6	0.8	0.8
Permeability, ml/cm ² x min.	45	30	183**	49
Filter				
Type	-	-	-*	-
Inner	C in Paper	C-CA	CA	C in Paper
Outer	CA	CA-PL	CA	CA
RTD, mm of H ₂ O	78	70	66	59
Length, mm	27.0	25.1	24.7	20.0
Weight, g	0.20	0.34	0.17	0.17
Fiber denier/shape	-	-	-	-
Inner	-	3.4/Y	3.6/Y	-
Outer	3.0/Y	3.2/Y	3.8/Y	4.2/Y
Carbon, mg/plug	9	35	52	34
Tipping Paper				
Length, mm	32.0	33.0	30.0	24.0
Color	Cork	White	Cork	Cork
Ventilation, %	46	29	None	None
Filler				
Total alkaloids, % (DWB)	2.14	1.84	2.18	2.12
Total red. sugars, % (DWB)	6.6	5.9	7.8	8.7
Reconstituted Tob., %	20	22	15	20
Expanded Stems, %	3	3	8	3
Expanded Tob., %	41	12	23	17
Wt. of Tob., g (12.5% OV)	0.575	0.698	0.616	0.769
Rod Length, mm	57.8	58.8	59.7	65.1
Rod Density, g/cc	0.199	0.241	0.211	0.237

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

*Space containing carbon granules.

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100 MM CHARCOAL FILTER CIGARETTES
(Brands Ranked by FTC Tar, left to right)

	<u>Tareyton</u> <u>Long Lights</u>	<u>Parliament</u> <u>Lights</u>	<u>Lark</u> <u>Lights</u>	<u>Tareyton</u>
¹ Sales	0.15	1.37	0.18	1.17
Smoke				
FTC Tar, mg/cigt.	8.1	11.7	12.3	13.1
Nicotine, mg/cigt.	0.69	0.99	0.98	0.95
Puffs/cigt.	10.6	10.0	8.4	9.5
Filtration Eff., %	58	56	48	59
Filter Rod TPM, mg/cigt.	25.3	30.0	22.5	24.8
Gas Phase Smoke Index, % Reduction	53	49	25	27
CO, mg/cigt.	8.3	11.1	10.9	15.0
Cigarette				
Total RTD, mm of H ₂ O	109	115	122	146
Static Burn. Time, min.	6.9	8.3	6.7	7.2
Length, mm	99.8	99.6	98.7	99.8
Circumference, mm	24.9	24.9	24.7	24.9
Paper				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.9	0.5	0.6	1.1
Permeability, ml/cm ² x min.	48	46	185**	47
Filter				
Type	-	-	-	-
Inner	C in Paper	C-CA	CA	C in Paper
Outer	CA	CA	CA	CA
RTD, mm of H ₂ O	91	109	74	70
Length, mm	26.8	20.0 ³	29.7	26.8
Weight, g	0.22	0.22	0.18	0.20
Fiber denier/shape	-	-	-	-
Inner	-	4.8/X	3.9/Y	-
Outer	3.2/I	3.2/Y	3.8/Y	4.7/Y
Carbon, mg/plug	8	52	48	33
Tipping Paper				
Length, mm	32.0	36.0	35.0	32.0
Color	Cork	White	Cork	Cork
Ventilation, %	45	33	None	None
Filler				
Total alkaloide, % (DWB)	2.17	2.11	2.20	2.20
Total red. sugars, % (DWB)	8.0	6.4	8.0	7.9
Reconstituted Tob., %	20	22	15	20
Expanded Stems, %	3	3	5	3
Expanded Tob., %	17	12	23	17
Wt. of Tob., g (12.5% OV)	0.839	0.813	0.716	0.846
Rod Length, mm	72.9	69.6	68.9	73.1
Rod Density, g/cc	0.233	0.236	0.215	0.236

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

²The reported value includes the recessed portion.

³Space containing carbon granules.

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80 MM FILTER CIGARETTES (BOX)
(Brands Ranked by FTC Tar, left to right)

	<u>Camel</u> <u>Lights</u>	<u>Winston</u> <u>Lights</u>	<u>Parliament</u> <u>Lights</u>	<u>Kent</u>	<u>Winston</u>	<u>Marlboro</u>
¹ Sales	0.87	0.64	1.30	0.09	1.56	25.07
Smoke						
FTC Tar, mg/cigt.	8.9	9.1	9.1	11.0	15.5	15.8
Nicotine, mg/cigt.	0.59	0.59	0.76	0.81	0.95	1.12
Puffs/cigt.	7.3	7.0	7.6	8.0	7.8	8.7
Filtration Eff., %	99	98	94	92	49	45
Filler Rod TPM, mg/cigt.	29.8	30.5	30.1	26.8	28.3	32.0
CO, mg/cigt.	9.9	10.0	8.8	11.2	13.9	12.9
Cigarette						
Total RTD, mm of H ₂ O	146	147	117	135	120	105
Static Burn. Time, min.	7.3	7.6	7.6	7.1	7.6	8.2
Length, mm	78.9	79.1	79.1	79.7	78.8	79.2
Circumference, mm	25.1	25.0	24.9	24.9	25.0	25.0
PAPER						
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.4	0.4	0.6	0.6	0.5	0.5
Permeability, ml/cm ² x min.	26	23	49	36	38	27
Filter						
Type	CA	CA	CA	CA	CA	CA
RTD, mm of H ₂ O	118	117	118	88	69	68
Length, mm	19.0	18.9	24.8 ²	20.9	19.0	19.0
Weight, g	0.14	0.14	0.13	0.14	0.13	0.12
Fiber denier/shape	2.7/Y	2.0/Y	2.4/Y	2.8/Y	2.6/Y	3.1/Y
Tipping Paper						
Length, mm	27.0	27.0	30.0	29.0	23.0	23.0
Color	Cork	Cork	White	White	Cork	Cork
Ventilation, %	20	20	29	21	None	10
Filler						
Total alkaloids, % (DMS)	1.77	1.77	2.14	2.04	1.89	2.03
Total red. sugars, % (DMS)	7.0	7.5	6.8	6.2	6.7	7.4
Reconstituted Tob., %	24	24	22	22	24	22
Expanded Stems, %	None	None	3	None	None	3
Expanded Tob., %	16	16	12	11	16	12
Wt. of Tob., g (12.5% OV)	(0.630)	0.634	0.628	0.696	0.697	0.714
Rod Length, mm	59.9	60.2	54.3	58.7	59.8	60.2
Rod Density, g/cc	(0.217)	0.219	0.234	0.241	0.235	0.239

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NON-FILTER CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	Camel	Commander Regular	Lucky Strike	Chester- field King	Pall Mall	Commander King Size
Sales	4.65	0.03	1.17	0.75	7.77	0.23
Smoke						
FTC Tar, mg/cigt.	20.0	20.9	23.6	20.4	22.5	23.8
Nicotine, mg/cigt.	1.31	1.34	1.48	1.38	1.49	1.57
Puffs/cigt.	6.8	7.4	8.2	8.8	9.9	8.9
Filler Rod TPM, mg/cigt.	31.0	30.7	35.3	26.3	27.9	30.5
CO, mg/cigt.	11.6	10.7	13.5	11.4	13.1	11.9
Cigarette						
Total RTD, mm of H ₂ O	63	54	69	78	78	59
Static Burn. Time, min.	7.7	8.3	10.0	7.3	7.9	7.4
Length, mm	68.9	70.1	69.0	84.2	84.0	84.0
Circumference, mm	25.0	24.9	25.0	25.0	24.9	25.0
PAPER						
Component Type	Cit.	Cit.	Phos.	Cit.	Cit.	Cit.
Component Percent	0.5	0.6	0.1	0.7	0.7	1.9
Permeability, ml/cm ² x min.	24	46	17	47	32	48
Filler						
Total alkaloids, % (DWB)	2.21	2.12	2.06	2.05	2.10	2.09
Total red. sugars, % (DWB)	7.3	8.9	10.3	10.6	10.1	9.1
Reconstituted Tob., %	15	18	20	10	20	18
Expanded Stems, %	None	3	3	5	3	3
Expanded Tob., %	16	13	11	18	11	13
Wt. of Tob., g (12.5% OV)	(0.772)	0.830	0.880	0.962	1.043	0.977
Rod Density, g/cc	(0.224)	0.240	0.256	0.231	0.252	0.234

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35 MM BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

	<u>Doral Ultra Lights</u>	<u>Century Lights 25's</u>	<u>Magna Lites (Box)</u>	<u>Malibu Lights</u>	<u>Doral Lights</u>
¹Sales	1.13	0.24	0.42	0.20	2.01
<u>Smoke</u>					
FTC Tar, mg/cigt.	5.5	8.7	8.8	8.8	9.7
Nicotine, mg/cigt.	0.46	0.68	0.62	0.75	0.73
Puffs/cigt.	8.5	7.8	7.1	8.1	7.1
Filtration Eff., %	62	57	60	49	54
Filler Rod TPM, mg/cigt.	31.9	28.3	30.1	28.5	29.0
CO, mg/cigt.	6.2	10.4	11.6	8.6	10.2
<u>Cigarette</u>					
Total RTD, mm of H ₂ O	96	140	146	102	104
Static Burn. Time, min.	8.6	7.7	7.1	7.3	7.3
Length, mm	84.1	83.1	78.7	82.9	83.8
Circumference, mm	25.0	24.2	25.0	25.0	25.0
<u>PARAX</u>					
Component Type	Phos.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.2	0.3	0.4	0.8	0.4
Permeability, ml/cm ² x min.	26	24	22	45	26
<u>Filter</u>					
Type	CA	CA	CA	CA	CA
RTD, mm of H ₂ O	117	124	118	87	85
Length, mm	26.8	24.4	19.1	24.9	26.8
Weight, g	0.17	0.16	0.14	0.18	0.16
Fiber denier/shape	3.0/Y	2.5/Y	2.2/Y	4.0/Y	3.1/Y
Tipping Paper					
Length, mm	31.0	27.0	27.0	30.0	31.0
Color	White	Cork	White	White	Cork
Ventilation, %	60	30	22	36	26
<u>Filler</u>					
Total alkaloids, % (DWB)	2.08	1.94	1.84	1.93	2.17
Total red. sugars, % (DWB)	6.7	6.3	6.6	8.8	6.9
Reconstituted Tob., %	24	24	24	20	24
Expanded Stems, %	None	None	None	None	None
Expanded Tob., %	25	20	16	12	25
Wt. of Tob., g (12.5% CV)	0.604	0.628	0.646	0.689	0.597
Rod Length, mm	57.3	58.7	59.6	58.0	57.0
Rod Density, g/cc	0.211	0.229	0.219	0.239	0.210

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85 MM BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

<u>Chesterfield Lights</u>	<u>Richland Lights 25's</u>	<u>Players Lights 25's</u>	<u>Magna Lights</u>	<u>Viceroy Lights</u>	
0.05	0.34	0.12	0.48	0.52	¹ Sales
9.9	10.3	10.5	10.3	11.0	Smoke
0.83	0.82	0.81	0.76	0.88	FTC Tar, mg/cigt.
7.0	7.9	8.6	7.3	8.1	Nicotine, mg/cigt.
53	55	58	59	58	Puffs/cigt.
26.7	32.9	30.4	31.8	31.3	Filtration Eff., %
11.6	11.3	11.0	10.8	11.0	Filler Rod TPM, mg/cigt.
					CO, mg/cigt.
133	134	119	115	132	Cigarette
7.4	8.0	7.7	7.3	8.0	Total RTD, mm of H ₂ O
84.2	84.1	84.0	83.9	83.7	Static Burn. Time, ² min.
24.7	24.6	24.9	25.1	25.0	Length, mm
					Circumference, mm
Cit.	Cit.	Cit.	Cit.	Cit.	Paper
0.7	0.5	0.4	0.6	0.7	Component Type
26	35	33	34	30	Component Percent
					Permeability, ml/cm ² x min.
CA	CA	CA	CA	CA	Filter
92	103	101	87	103	Type
24.9	26.9	26.9	26.9	26.9	RTD, mm of H ₂ O
0.15	0.17	0.17	0.17	0.17	Length, mm
3.0/Y	2.8/Y	2.8/Y	2.3/Y	2.5/Y	Weight, g
					Fiber denier/shape
33.0	32.0	31.0	31.0	32.0	Tipping Paper
Cork	White	White	White	Cork	Length, mm
22	20	27	15	21	Color
					Ventilation, %
2.04	2.06	2.05	1.85	2.13	Filler
8.3	7.3	7.1	6.9	6.6	Total alkaloids, % (DWB)
15	16	22	24	16	Total red. sugars, % (DWB)
5	5	3	None	5	Reconstituted Tob., %
23	None	15	16	None	Expanded Stems, %
0.621	0.707	0.664	0.644	0.730	Expanded Tob., %
59.3	57.2	57.2	57.0	56.8	Wt. of Tob., g (12.5% OV)
0.216	0.257	0.235	0.225	0.259	Rod Length, mm
					Rod Density, g/cc

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85 MM. BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

	<u>Cambridge Lights</u>	<u>American Lights</u>	<u>Magna</u>	<u>Magna (Box)</u>	<u>Doral Full Flavor (Box)</u>
¹Sales	1.32	0.38	0.61	0.56	-
<u>Smoke</u>					
FTC Tar, mg/cigt.	11.3	11.6	12.8	13.3	13.5
Nicotine, mg/cigt.	0.88	0.91	0.89	0.84	0.76
Puffs/cigt.	8.4	8.6	6.9	6.5	7.1
Filtration Eff., %	52	51	51	44	47
Filler Rod TPM, mg/cigt.	33.2	31.6	26.0	26.6	28.7
CO, mg/cigt.	10.7	11.5	12.9	12.6	17.7
<u>Cigarette</u>					
Total RTD, mm of H ₂ O	111	123	119	120	152
Static Burn. Time, min.	8.3	8.6	6.7	6.4	7.7
Length, mm	84.1	82.9	84.0	79.0	79.0
Circumference, mm	24.9	25.0	25.0	24.9	24.8
<u>PAPER</u>					
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.8	0.4	0.6	0.2
Permeability, ml/cm ² x min.	25	28	24	40	21
<u>Filter</u>					
Type	CA	CA	CA	CA	CA
RTD, mm of H ₂ O	88	87	79	69	83
Length, mm	27.0	25.0	21.0	19.0	19.1
Weight, g	0.17	0.17	0.14	0.13	0.13
Fiber denier/shape	3.8/Y	3.8/Y	3.4/Y	3.4/Y	2.4/Y
Tipping Paper					
Length, mm	31.0	30.0	25.0	23.0	23.0
Color	Cork	White	Cork	Cork	Cork
Ventilation, %	23	21	7	None	None
<u>Filler</u>					
Total alkaloids, % (DWS)	2.06	2.01	2.12	2.05	2.10
Total red. sugars, % (DWS)	7.4	8.1	6.5	6.4	6.5
Reconstituted Tob., %	22	20	24	24	24
Expanded Stems, %	3	None	None	None	None
Expanded Tob., %	15	12	25	25	25
Wt. of Tob., g (12.5% OV)	0.670	0.731	0.619	0.627	0.626
Rod Length, mm	57.1	57.9	63.0	59.9	59.9
Rod Density, g/cc	0.238	0.254	0.198	0.211	0.214

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85 MM. BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

<u>Pyramid Lights</u>	<u>Doral Full Flavor</u>	<u>Century 25's</u>	<u>Malibu</u>	<u>American Filters</u>	
0.32	1.30	0.21	0.17	0.20	¹ Sales
					<u>Smoke</u>
14.0	14.2	14.5	15.0	15.7	FTC Tar, mg/cigt.
1.07	1.02	0.94	1.12	1.14	Nicotine, mg/cigt.
7.8	7.6	7.0	9.6	9.7	Puffs/cigt.
48	46	46	41	41	Filtration Eff., %
28.8	30.7	35.5	31.1	29.3	Filler Rod TPM, mg/cigt.
12.8	13.6	16.3	12.6	14.5	CO, mg/cigt.
					<u>Cigarette</u>
117	114	147	113	114	Total RTD, mm of H ₂ O
7.9	7.3	8.4	8.1	7.9	Static Burn. Time, min.
83.8	83.9	82.9	84.7	84.9	Length, mm
24.7	25.0	24.1	25.0	24.8	Circumference, mm
					<u>Paper</u>
Cit.	Phos.	Phos.	Cit.	Cit.	Component Type
0.5	0.1	0.2	0.8	0.9	Component Percent
143*	26	26	48	46	Permeability, ml/cm ² min.
					<u>Filter</u>
CA	CA	CA	CA	CA	Type
65	69	91	60	56	RTD, mm of H ₂ O
24.8	21.0	23.0	20.2	20.0	Length, mm
0.14	0.12	0.14	0.14	0.13	Weight, g
4.4/Y	4.5/Y	2.6/Y	4.5/Y	4.5/Y	Fiber denier/shape
					Tipping Paper
30.0	25.0	27.0	24.0	24.0	Length, mm
Cork	Cork	Cork	Cork	Cork	Color
None	7	None	15	13	Ventilation, %
					<u>Filler</u>
2.10	2.12	2.03	1.97	1.99	Total alkaloids, % (DWS)
8.4	6.6	6.4	8.9	9.4	Total red. sugars, % (DWS)
15	24	24	20	20	Reconstituted Tob., %
5	None	None	None	None	Expanded Stems, %
23	25	25	12	12	Expanded Tob., %
0.629	0.665	0.646	0.834	0.809	Wt. of Tob., g (12.5% OV)
59.0	62.9	60.0	64.5	64.9	Rod Length, mm
0.220	0.213	0.233	0.261	0.255	Rod Density, g/cc

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6. 94 BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

	<u>Cambridge</u> <u>Full Flavor</u>	<u>Richland</u> <u>25's</u>	<u>Viceroy</u>	<u>Pyramid</u> <u>(NY)</u>
Sales	0.97	0.68	2.22	0.92
Smoke				
FTC Tar, mg/cigt.	19.9	16.1	17.1	21.2
Nicotine, mg/cigt.	1.10	1.13	1.24	1.35
Puffs/cigt.	8.5	8.6	8.9	8.4
Filtration Eff., %	47	46	47	-
Filler Rod TPM, mg/cigt.	30.1	28.9	31.7	28.9
CO, mg/cigt.	13.3	13.9	13.6	10.8
Cigarette				
Total RTD, mm of H ₂ O	116	130	115	73
Static Burn. Time, min.	7.9	7.8	7.3	7.7
Length, mm	84.1	84.0	83.9	84.0
Circumference, mm	24.9	24.8	25.0	24.9
Paper				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.4	0.4	0.4	0.6
Permeability, ml/cm ² x min.	41	25	29	44
Filter				
Type	CA	CA	CA	-
RTD, mm of H ₂ O	68	77	74	-
Length, mm	21.0	21.0	21.0	-
Weight, g	0.12	0.13	0.13	-
Fiber denier/shape	2.6/Y	2.6/Y	3.9/Y	-
Tipping Paper				
Length, mm	25.0	26.0	26.0	-
Color	Cork	Cork	Cork	-
Ventilation, %	None	8	9	-
Filler				
Total alkaloids, % (DWB)	2.04	2.09	2.09	2.04
Total red. sugars, % (DWB)	7.1	6.8	6.8	10.5
Reconstituted Tob., %	22	14	12	10
Expanded Stems, %	3	7	7	5
Expanded Tob., %	15	11	11	18
Wt. of Tob., g (12.5% OV)	0.736	0.775	0.728	0.955
Rod Length, mm	63.1	63.0	62.9	84.0
Rod Density, g/cc	0.236	0.251	0.233	0.230

¹Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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85 MM MENTHOL BRANDED GENERICs
(Brands Ranked by FTC Tar, left to right)

	<u>Alpine Lights</u>	<u>Players Lights 25's</u>	<u>Doral Lights</u>	<u>Cambridge Lights</u>
¹ Sales	0.52	0.06	0.96	0.48
Smoke				
FTC Tar, mg/cigt.	9.4	9.4	9.5	12.1
Nicotine, mg/cigt.	0.72	0.74	0.68	0.92
Puffs/cigt.	7.8	8.4	7.4	8.3
Filtration Eff., %	52	55	54	53
Filler Rod TPM, mg/cigt.	27.5	33.3	27.4	31.3
CO, mg/cigt.	10.1	9.8	9.6	11.6
Cigarette				
Total RTD, mm of H ₂ O	111	119	92	112
Static Burn. Time, min.	8.3	8.0	7.1	8.0
Length, mm	83.7	83.9	83.8	84.0
Circumference, mm	24.9	25.0	25.0	24.9
PAPER				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.4	0.5	0.5	0.5
Permeability, ml/cm ² x min.	38	41	26	27
Filter				
Type	CA	CA	CA	CA
RTD, mm of H ₂ O	89	104	87	89
Length, mm	26.9	26.9	26.9	27.0
Weight, g	0.16	0.17	0.16	0.17
Fiber denier/shape	3.0/Y	3.1/Y	3.1/Y	3.9/Y
Tipping Paper				
Length, mm	31.0	31.0	31.0	31.0
Color	White	White	Cork	White
Ventilation, %	26	29	35	22
Filler				
Total alkaloids, % (DMB)	2.13	2.02	1.83	2.07
Total red. sugars, % (DMB)	8.2	6.8	7.9	7.3
Reconstituted Tob., %	22	22	24	22
Expanded Stems, %	5	3	None	3
Expanded Tob., %	14	15	(20)	15
Wt. of Tob., g (12.5% OV)	0.657	0.664	(0.606)	0.670
Rod Length, mm	56.8	57.0	57.0	57.0
Rod Density, g/cc	0.234	0.233	(0.214)	0.238
Menthol, mg/cigt.				
Smoke	0.55	0.50	0.42	0.61
Filler	2.5	2.5	2.1	2.5
Filter	1.9	1.7	1.7	1.6

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85 MM MENTHOL BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

	<u>Richland</u> <u>25's</u>	<u>Alpine</u>	<u>Doral Full</u> <u>Flavor</u>	<u>Malibu</u>
Sales	0.28	0.55	0.35	0.15
Smoke				
FTC Tar, mg/cigt.	14.9	15.1	15.4	15.4
Nicotine, mg/cigt.	0.97	1.02	1.07	1.17
Puffs/cigt.	7.1	8.2	7.7	10.1
Filtration Eff., %	41	44	47	40
Filler Rod TPM, mg/cigt.	25.9	27.9	30.3	31.3
CO, mg/cigt.	14.3	13.2	14.2	12.3
Cigarette				
Total RTD, mm of H ₂ O	117	118	110	111
Static Burn. Time, min.	7.0	7.5	7.5	8.1
Length, mm	83.4	83.9	83.9	84.9
Circumference, mm	24.9	24.9	25.0	25.0
PAPER				
Component Type	Cit.	Cit	Cit..	Cit.
Component Percent	0.7	0.5	0.4	0.8
Permeability, ml/cm ² x min.	27	32	25	47
Filter				
Type	CA	CA	CA	CA
RTD, mm of H ₂ O	57	64	68	58
Length, mm	21.1	21.0	21.0	20.2
Weight, g	0.12	0.13	0.13	0.14
Fiber denier/shape	3.6/Y	3.4/Y	2.5/Y	4.0/Y
Tipping Paper				
Length, mm	26.0	25.0	25.0	24.0
Color	Cork	White	Cork	Cork
Ventilation, %	None	None	7	19
Filler				
Total alkaloids, % (DWB)	2.20	2.08	2.13	2.02
Total red. sugars, % (DWB)	6.8	8.4	7.2	9.2
Reconstituted Tob., %	14	22	24	20
Expanded Stems, %	7	5	None	None
Expanded Tob., %	11	14	25	12
Wt. of Tob., g (12.5% OV)	0.713	0.723	0.669	0.816
Rod Length, mm	62.3	62.8	63.0	64.7
Rod Density, g/cc	0.231	0.233	0.214	0.254
Menthol, mg/cigt.				
Smoke	0.50	0.59	0.48	0.59
Filler	2.0	2.0	1.7	2.5
Filter	1.1	1.1	0.8	1.4

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100 MM BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

	<u>Cambridge Ultra Lights</u>	<u>Doral Ultra Lights</u>	<u>Savvy Ultra Lights</u>	<u>Pyramid Ultra Lights</u>	<u>Malibu Ultra Lights</u>
¹ Sales	1.33	0.80	0.05	0.32	-
Smoke					
FTC Tar, mg/cigt.	4.9	5.3	5.0	5.9	6.2
Nicotine, mg/cigt.	0.42	0.48	0.57	0.52	0.49
Puffs/cigt.	10.3	10.1	9.4	9.4	9.4
Filtration Eff., %	68	66	53	53	60
Filler Rod TPM, mg/cigt.	27.9	33.0	27.5	25.4	24.9
CO, mg/cigt.	5.0	6.8	4.0	4.2	6.4
Cigarette					
Total RTD, mm of H ₂ O	108	104	77	73	124
Static Burn. Time, min.	7.7	7.7	7.2	6.6	7.1
Length, mm	99.0	98.7	98.9	98.7	99.5
Circumference, mm	25.0	25.0	24.7	24.9	24.4
PAPER					
Component Type	Cit.	Phos.	Cit.	Cit.	Cit.
Component Percent	2.0	0.1	0.7	0.7	0.9
Permeability, ml/cm ² x min.	48	25	28	28	49
Filter					
Type	CA	CA	CA	CA	CA
RTD, mm of H ₂ O	144	136	82	77	125
Length, mm	31.4	31.0	29.6	29.7	26.9
Weight, g	0.21	0.21	0.16	0.17	0.18
Fiber denier/shape	2.9/Y	3.2/Y	4.9/Y	3.4/Y	3.2/Y
Tipping Paper					
Length, mm	36.0	35.0	35.0	35.0	35.0
Color	White	White	White	White	White
Ventilation, %	58	60	64	64	50
Filler					
Total alkaloids, % (DWB)	2.12	2.09	2.18	2.21	2.20
Total red. sugars, % (DWB)	7.2	7.1	8.2	8.3	7.6
Reconstituted Tob., %	22	24	15	15	24
Expanded Stems, %	3	None	5	5	None
Expanded Tob., %	15	25	23	23	24
Wt. of Tob., g (12.5% OV)	0.805	0.706	0.738	0.734	0.780
Rod Length, mm	67.7	67.7	69.3	68.9	72.7
Rod Density, g/cc	0.240	0.210	0.219	0.217	0.227

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100 MM BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

	<u>Malibu</u> <u>Lights</u>	<u>Chesterfield</u> <u>Lights</u>	<u>Savvy</u> <u>Lights</u>	<u>Doral</u> <u>Lights</u>	<u>Century</u> <u>Lights 25's</u>
¹ Sales	0.64	0.05	0.05	2.99	0.91
Smoke					
FTC Tar, mg/cigt.	9.1	10.1	10.2	11.4	11.5
Nicotine, mg/cigt.	0.76	0.84	0.89	0.91	0.88
Puffs/cigt.	10.6	8.6	8.6	9.4	8.4
Filtration Eff., %	57	54	48	51	53
Filler Rod TPM, mg/cigt.	26.1	24.7	27.4	29.0	27.1
CO, mg/cigt.	9.8	10.0	10.5	10.2	12.0
Cigarette					
Total RTD, mm of H ₂ O	122	112	106	96	123
Static Burn. Time, min.	7.8	6.6	7.1	7.2	7.1
Length, mm	99.7	98.8	98.6	98.7	97.8
Circumference, mm	24.4	24.8	24.7	25.0	24.1
Paper					
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.8	0.9	0.7	0.6	0.5
Permeability, ml/cm ² x min.	44	31	31	25	24
Filter					
Type	CA	CA	CA	CA	CA
RTD, mm of H ₂ O	108	80	77	77	97
Length, mm	26.7	29.8	29.9	31.0	31.0
Weight, g	0.17	0.17	0.16	0.18	0.18
Fiber denier/shape	3.9/Y	4.0/Y	3.5/Y	3.6/Y	3.7/Y
Tipping Paper					
Length, mm	32.0	35.0	35.0	35.0	35.0
Color	White	Cork	White	Cork	Cork
Ventilation, %	38	33	34	33	24
Filler					
Total alkaloids, % (DWB)	2.05	2.25	2.08	2.16	2.12
Total red. sugars, % (DWB)	8.7	7.6	8.6	6.6	7.3
Reconstituted Tob., %	20	15	15	24	24
Expanded Stems, %	None	5	5	None	None
Expanded Tob., %	12	23	23	25	20
Wt. of Tob., g (12.5% OV)	0.826	0.725	0.735	0.725	0.704
Rod Length, mm	73.0	68.9	68.7	67.7	66.9
Rod Density, g/cc	0.239	0.215	0.220	0.216	0.227

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100 MM BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

<u>American Lights</u>	<u>Players Lights 25's</u>	<u>Cambridge Lights</u>	<u>Richland Lights 25's</u>	<u>Viceroy Lights</u>	
0.58	0.33	1.94	0.47	0.55	¹ Sales
					Smoke
11.6	11.7	12.1	12.5	12.6	FTC Tar, mg/cigt.
0.91	0.90	0.91	0.93	0.96	Nicotine, mg/cigt.
11.0	10.6	10.1	9.4	9.4	Puffs/cigt.
52	60	59	57	58	Filtration Eff., %
26.8	31.2	31.7	29.5	30.1	Filter Rod TPM, mg/cigt.
11.4	12.9	12.6	13.1	12.4	CO, mg/cigt.
					Cigarette
130	122	127	141	132	Total RTD, mm of H ₂ O
7.8	8.1	7.8	7.7	7.4	Static Burn. Time, min.
99.6	99.4	99.5	99.1	98.8	Length, mm
24.5	24.9	25.0	24.9	24.9	Circumference, mm
					Paper
Cit.	Cit.	Cit.	Cit.	Cit.	Component Type
1.0	0.5	0.6	0.7	1.1	Component Percent
46	26	21	45	48	Permeability, ml/cm ² min.
					Filter
CA	CA	CA	CA	CA	Type
96	109	106	102	104	RTD, mm of H ₂ O
26.7	31.5	31.4	26.8	29.8	Length, mm
0.17	0.19	0.19	0.17	0.18	Weight, g
3.8/Y	2.8/Y	2.8/Y	3.2/Y	2.9/Y	Fiber denier/shape
					Tipping Paper
32.0	36.0	36.0	36.0	36.0	Length, mm
White	White	Cork	White	Cork	Color
29	28	26	16	17	Ventilation, %
					Filler
2.16	2.08	2.08	2.02	2.08	Total alkaloids, % (DWB)
9.2	6.8	7.1	7.9	7.0	Total red. sugars, % (DWB)
20	22	22	16	16	Reconstituted Tob., %
None	3	3	5	5	Expanded Stems, %
12	15	15	None	None	Expanded Tob., %
0.871	0.798	0.797	0.893	0.858	Wt. of Tob., g (12.5% OV)
72.9	67.9	68.1	72.3	69.0	Rod Length, mm
0.251	0.239	0.235	0.250	0.252	Rod Density, g/cc

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100 MM BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

	<u>Pyramid Lights</u>	<u>Doral Full Flavor</u>	<u>Malibu</u>	<u>American Filters</u>
¹ Sales	0.32	1.85	0.43	0.20
Smoke				
FTC Tar, mg/cigt.	13.4	14.9	15.1	15.4
Nicotine, mg/cigt.	1.04	1.00	1.25	1.14
Puffs/cigt.	8.3	8.1	11.1	10.1
Filtration Eff., %	52	53	46	46
Filler Rod TPM, mg/cigt.	28.3	29.0	27.1	24.5
CO, mg/cigt.	14.4	15.9	13.3	11.9
Cigarette				
Total RTD, mm of H ₂ O	131	133	129	123
Static Burn. Time, min.	7.3	7.2	7.4	7.3
Length, mm	98.6	98.8	99.7	99.7
Circumference, mm	24.8	25.0	24.5	24.5
Paper				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.6	0.5	1.3	0.9
Permeability, ml/cm ² x min.	77*	25	43	47
Filter				
Type	CA	CA	CA	CA
RTD, mm of H ₂ O	65	78	68	64
Length, mm	29.9	31.0	26.9	26.8
Weight, g	0.17	0.18	0.17	0.14
Fiber denier/shape	4.4/Y	4.5/Y	6.6/Y	4.5/Y
Tipping Paper				
Length, mm	35.0	35.0	32.0	32.0
Color	Cork	Cork	Cork	Cork
Ventilation, %	None	None	14	11
Filler				
Total alkaloids, % (DWB)	2.17	2.14	2.03	2.17
Total red. sugars, % (DWB)	8.7	6.6	9.1	8.4
Reconstituted Tob., %	15	24	20	20
Expanded Stems, %	5	None	None	None
Expanded Tob., %	23	25	12	12
Wt. of Tob., g (12.5% OV)	0.733	0.704	0.858	0.849
Rod Length, mm	68.7	67.8	72.8	72.8
Rod Density, g/cc	0.219	0.209	0.248	0.244

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*These cigarette papers are perforated.

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100 MM BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

<u>Century</u> <u>25's</u>	<u>Cambridge</u> <u>Full Flavor</u>	<u>Richland</u> <u>25's</u>	<u>Viceroy</u>	
0.65	1.26	0.75	1.17	'Sales
				Smoke
15.8	16.0	16.5	17.9	FTC Tar, mg/cigt.
1.03	1.10	1.23	1.30	Nicotine, mg/cigt.
8.3	8.6	10.6	10.6	Puffs/cigt.
55	49	51	51	Filtration Eff., %
34.2	28.6	33.4	34.0	Filler Rod TPM, mg/cigt.
19.6	14.9	15.6	14.4	CO, mg/cigt.
				Cigarette
143	113	125	111	Total RTD, mm of H ₂ O
8.2	7.3	8.1	8.0	Static Burn. Time, min.
97.8	99.3	99.1	98.8	Length, mm
24.1	25.0	24.9	24.9	Circumference, mm
				Paper
Phos.	Cit.	Cit.	Cit.	Component Type
0.2	1.7	0.5	0.5	Component Percent
24	44	23	24	Permeability, nl/cm ² x min.
				Filter
CA	CA	CA	CA	Type
95	61	76	75	RTD, mm of H ₂ O
31.0	31.4	26.8	26.6	Length, mm
0.18	0.18	0.15	0.15	Weight, g
3.8/Y	4.4/Y	3.2/Y	4.1/Y	Fiber denier/shape
				Tipping Paper
35.0	36.0	32.0	32.0	Length, mm
Cork	Cork	Cork	Cork	Color
12	None	16	16	Ventilation, %
				Filler
2.04	2.10	2.13	2.10	Total alkaloids, % (DWB)
7.0	7.7	7.2	6.4	Total red. sugars, % (DWB)
24	22	16	12	Reconstituted Tob., %
None	3	5	7	Expanded Stems, %
16	15	None	11	Expanded Tob., %
0.712	0.785	0.887	0.847	Wt. of Tob., g (12.5% OV)
66.7	67.9	72.3	72.2	Rod Length, mm
0.230	0.233	0.250	0.238	Rod Density, g/cc

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2031438399

100 MM MENTHOL BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

	<u>Doral Lights</u>	<u>Alpine Lights</u>	<u>Savvy Lights</u>	<u>Cambridge Lights</u>	<u>Players Lights 25's</u>
Sales	1.81	0.69	0.05	1.09	0.20
Smoke					
FTC Tar, mg/cigt.	9.3	10.0	10.2	11.0	11.4
Nicotine, mg/cigt.	0.69	0.78	0.90	0.89	0.90
Puffs/cigt.	9.0	9.4	8.9	9.9	10.3
Filtration Eff., %	55	56	50	58	48
Filler Rod TPM, mg/cigt.	28.9	28.1	26.5	31.8	30.5
CO, mg/cigt.	11.7	10.7	9.4	11.0	12.9
Cigarette					
Total RTD, mm of H ₂ O	119	125	109	128	127
Static Burn. Time, min.	7.2	7.8	7.1	8.0	8.6
Length, mm	99.0	99.4	99.6	99.6	99.5
Circumference, mm	25.0	25.0	24.6	25.0	24.9
PAPER					
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.9	0.6	0.6	0.5	0.4
Permeability, ml/cm ² x min.	26	30	34	27	28
Filter					
Type	CA	CA	CA	CA	CA
RTD, mm of H ₂ O	114	104	81	108	109
Length, mm	30.9	31.6	29.8	31.4	31.5
Weight, g	0.19	0.20	0.17	0.19	0.19
Fiber denier/shape	3.6/Y	3.0/Y	3.5/Y	2.8/Y	3.0/Y
Tipping Paper					
Length, mm	35.0	36.0	35.0	36.0	36.0
Color	Cork	White	White	White	White
Ventilation, %	32	28	37	27	27
Filler					
Total alkaloide, % (DWB)	1.80	2.06	2.11	2.07	2.03
Total red. sugars, % (DWB)	7.7	8.4	8.7	7.2	7.0
Reconstituted Tob., %	24	22	15	22	22
Expanded Stems, %	None	5	5	3	3
Expanded Tob., %	(20)	14	23	15	15
Wt. of Tob., g (12.5% OV)	(0.738)	0.785	0.733	0.806	0.813
Rod Length, mm	68.2	67.8	68.8	68.2	68.0
Rod Density, g/cc	(0.217)	0.234	0.221	0.238	0.242
Menthol, mg/cigt.					
Smoke	0.49	0.56	0.40	0.60	0.70
Filler	3.0	2.9	1.9	3.4	3.5
Filter	1.8	2.0	1.1	2.0	1.8

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2031438400

100 MM MENTHOL BRANDED GENERICS
(Brands Ranked by FTC Tar, left to right)

<u>Malibu</u> <u>Low Tar</u>	<u>Pyramid</u> <u>Lights</u>	<u>Alpine</u>	<u>Doral</u> <u>Full Flavor</u>	
0.63	0.32	0.59	0.44	'Sales
				<u>Smoke</u>
11.4	14.1	15.3	15.4	FTC Tar, mg/cigt.
0.93	1.07	1.08	1.11	Nicotine, mg/cigt.
10.6	8.3	9.7	8.1	Puffs/cigt.
53	50	44	51	Filtration Eff., %
27.7	28.1	26.0	30.0	Filler Rod TPM, mg/cigt.
11.1	14.2	14.6	16.9	CO, mg/cigt.
				<u>Cigarette</u>
127	125	115	125	Total RTD, mm of H ₂ O
7.4	6.7	7.6	7.3	Static Burn. Time, min.
99.5	98.1	99.5	98.8	Length, mm
24.5	24.7	24.8	24.9	Circumference, mm
				<u>Paper</u>
Cit.	Cit.	Cit.	Cit.	Component Type
0.9	2.0	0.6	0.5	Component Percent
44	124*	48	25	Permeability, ml/cm ² x min.
				<u>Filter</u>
CA	CA	CA	CA	Type
92	69	63	80	RTD, mm of H ₂ O
26.8	29.6	27.5	30.9	Length, mm
0.17	0.17	0.17	0.18	Weight, g
3.8/Y	4.4/Y	4.5/Y	3.8/Y	Fiber denier/shape
				Tipping Paper
32.0	35.0	32.0	35.0	Length, mm
White	White	White	Cork	Color
30	None	10	None	Ventilation, %
				<u>Filler</u>
1.97	2.05	2.08	2.13	Total alkaloids, % (DWB)
8.8	8.5	8.4	6.8	Total red. sugars, % (DWB)
20	15	22	24	Reconstituted Tob., %
None	5	5	None	Expanded Stems, %
12	23	14	25	Expanded Tob., %
0.847	0.724	0.837	0.712	Wt. of Tob., g (12.5% OV)
72.7	68.5	72.0	67.9	Rod Length, mm
0.245	0.218	0.238	0.212	Rod Density, g/cc
				<u>Menthol, mg/cigt.</u>
0.69	0.42	0.65	0.47	Smoke
4.0	2.0	2.5	1.9	Filler
2.1	1.1	1.3	0.9	Filter

*These cigarette papers are perforated.

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**BLEND COMPONENTS
PERCENT BY WEIGHT**

	<u>Reconstituted Tobacco</u>	<u>Expanded Stems</u>	<u>Expanded Tobacco</u>
<u>PHILIP MORRIS</u>			
Alpine 85, 100, Alpine Lights 85, 100	22	3	14
B & W 100 (plain & menthol)	22	3	13
B & W Lights 100 (plain & menthol)			
B & W Multifilter 85 (plain)			
Marlboro 80, 85, 100			
Marlboro Lights 85, 100			
Merit 85, 100 (plain & menthol)			
Parliament Lights 80, 85, 100			
Saratoga 120 (plain & menthol)			
Va. Slime 100 (plain & menthol)			
Va. Slime Lights 100 (plain & men.)			
Va. Slime Lights 120 (plain & men.)			
Merit Ultra Lights 85, 100 (plain & men.)	22	None	21
Marlboro Menthol 85	22	None	15
Marlboro Lights Menthol 85, 100 (Box)			
B & W Deluxe Ultra Lts. 100 (plain & men.)	22	3	19
Va. Slime Ultra Lights 100 (plain & men.)			
Commander 70 & 85 (MF)	18	3	13
Cambridge Ultra Lights 100	22	3	15
Cambridge Lights 85 & 100 (plain & men.)			
Cambridge Full Flavor 85 & 100			
Playmate Lights 85, 100 (plain & men.)			
<u>ROCHE & WILKINSON</u>			
Barclay 85, 100	14	7	11
Richland 85 (plain & men.)			
Keel Milda 80, 85	13	10	11
Keel 85, 100			
Keel Lights 85, 100			
Keel Ultra 85, 100			
Belair 85, 100	11	14	12
Raleigh 85, 100			
Viceroy 85, 100	12	7	11
Raleigh Lights 85, 100	16	5	None
Richland Lights 85, 100			
Richland 100			
Viceroy Lights 85, 100			
Capri 100	19	None	None
Capri Menthol 100	11	None	None
<u>LORILLARD</u>			
Kent 80, 85, 100	22	None	11
Kent Golden Lights 85, 100 (plain & men.)			
Newport 85, 100			
Newport Lights 85, 100			
Old Gold 85			
Satin 100 (plain & menthol)			
True 85, 100 (plain & menthol)	20	None	14
Kent III 85, 100	15	None	25

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**BLEND COMPONENTS
PERCENT BY WEIGHT**

	<u>Reconstituted Tobacco</u>	<u>Expanded Stems</u>	<u>Expanded Tobacco</u>
<u>KEYHOLE</u>			
Salem Ultra Lights 85	24	None	20
Century 85	24	None	25
Doral Full Flavor 80, 85, 100 (plain & ment.)			
Doral Lights 85, 100			
Doral Ultra Lights 85, 100			
Winston Ultra Lights 85, 100			
Vantage Ultra Lights 85, 100			
Magna 80, 85			
Century Lights 85, 100	24	None	20
Doral Lights Menthol 85, 100			
Salem Slim Lights 100			
Vantage 85, 100			
Camel 85	24	None	16
Camel Lights 80, 85, 100			
Century 100			
Magna Lites 80, 85			
Moré 120 (plain & menthol)			
Moré Lights 100 (plain & menthol)			
Rits 100 (plain & menthol)			
Salem 85, 100			
Salem Lights 85, 100			
Salem Ultra Lights 100			
Vantage 85, 100 Menthol			
Winston 80, 85, 100			
Winston Lights 80, 85, 100			
New 85, 100 (plain & menthol)	15	None	33
Camel 70 (MF)	15	None	16
<u>AMERICAN</u>			
Malibu Ultra Lights 100	24	None	24
Carlton 80, 85, 100 (plain & ment.)	20	None	46
Carlton 120 (plain & menthol)	20	None	34
American Filters 85, 100	20	None	12
American Lights 85, 100			
Lucky Strike 85			
Malibu 85, 100 (plain & menthol)			
Malibu Lights 85, 100			
Tareyton Lights 85	20	3	41
Tareyton 85, 100	20	3	17
Tareyton Long Lights 100			
Lucky Strike 70 (MF)	20	3	11
Full Mall 85 (MF)			
Full Mall 100			
<u>LIGHTS</u>			
Chesterfield Lights 85, 100	15	5	23
Lark Lights 85, 100			
L & M 85, 100			
Pyramid Lights 85, 100, Ment. 100			
Pyramid Ultra Lights 100			
Savvy Lights 100 (plain & ment.)			
Savvy Ultra Lights 100			
Chesterfield 85 (MF)	10	5	18
Pyramid 85 (MF)			

These data are based on the average values for the brands manufactured in January through December, 1989.

2031438403

MINOR BRANDS

Brand	Cigt. Length, mm	FTC Tar, mg/cigt.	Nicotine, mg/cigt.	Puffs/ cigt.	CO, mg/cigt.
<u>FILTER - PLAIN</u>					
Now 80 (Box)	78.7	0.0	0.00	6.3	0.4
Kent Golden Lights 80 (Box)	79.0	7.9	0.69	6.8	8.6
L & M 80 (Box)	81.0	15.5	1.11	7.8	11.3
Camel 80 (Box)	79.1	15.5	1.00	7.8	14.1
Barclay 80 (Box)	80.0	*	*	*	*
Ultra Carlton 85 (Box)	83.0	0.0	0.00	6.1	0.0
Triumph 85	83.7	3.6	0.31	7.1	3.5
Lucky Strike Lights 85	83.0	8.2	0.67	8.1	8.4
Old Gold Lights 85	84.0	8.3	0.75	7.1	9.6
PLAYERS 85 (BOX)	83.1	11.8	0.90	8.2	11.8
Lucky Strike 85 (Box)	83.1	13.2	1.00	8.2	13.4
Full Mall 85	84.9	14.2	1.06	9.3	13.6
B & W 85 (BOX)	84.5	14.8	1.27	9.6	12.3
Kent III 100 (Box)	98.9	5.2	0.46	8.3	7.3
Triumph 100	99.3	5.7	0.49	8.1	6.1
Kent Golden Lights 100 (Box)	98.8	9.5	0.86	9.0	9.5
Lucky Strike Lights 100	99.7	9.6	0.80	10.6	9.1
Full Mall Lights 100	99.8	9.9	0.82	9.6	11.6
Silva Thins 100	98.7	12.6	1.03	9.5	11.4
Eve Slim Lights 100 (Box)	97.8	11.8	0.96	7.7	9.9
Lucky Strike 100	99.8	12.5	0.98	10.4	11.4
HI-LITE 100 (BOX)	98.6	12.5	1.06	10.9	12.9
PLAYERS 100 (BOX)	98.3	13.3	1.03	9.4	12.3
St. Moritz 85	99.8	13.5	1.07	8.6	15.1
MARLBORO 100 (BOX)	98.3	15.7	1.14	10.3	14.3
P.M. INTERNATIONAL 100 (BOX)	98.5	16.1	1.16	10.3	15.3
B & W (BOX)	98.5	16.1	1.18	10.2	14.4
Old Gold 100	98.7	18.0	1.42	8.7	16.3
Eve Lights 120 (Box)	119.6	12.6	1.11	13.6	11.4
Max 120	119.3	16.0	1.24	10.0	16.7
Tall 120	119.6	17.2	1.47	14.2	16.9
<u>FILTER - CHARCOAL</u>					
Lark 85	84.8	12.8	1.10	7.1	13.5
Lark 100	98.7	13.8	1.16	8.9	13.3

¹Filter Type: CA = Cellulose Acetate, C = Carbon

²The FTC has determined that the present testing methodology does not accurately measure Brown & Williamson's Barclay and Kool Ultra cigarette smoke deliveries. Data are given on page XII.

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MINOR BRANDS

Total RTD, mm of H ₂ O	Ventila- tion, %	Circum- ference, mm	Permeability, ml/cm ² min.	Color	Tipping Paper Length, mm	Filter Length, mm	Filter Type ¹
103	95	25.0	40	White	32.0	27.6	CA
102	32	25.1	29	White	30.0	25.0	CA
107	None	24.9	184**	White	26.0	21.1	CA
122	None	24.9	39	Cork	23.0	19.1	CA
47	82	24.9	25	Cork	32.0	27.0	CA
111	97	25.1	173**	White	36.0	32.2	CA
101	63	24.9	29	Cork	32.0	24.9	CA/CA
133	30	25.0	46	Cork	30.0	25.0	CA
102	36	25.0	29	Cork	32.0	24.9	CA
110	22	25.0	21	Cork	32.0	26.9	CA
123	14	25.0	28	Cork	30.0	25.1	CA
116	15	24.9	45	Cork	24.0	20.1	CA
111	23	24.8	33	White	30.0	25.0	CA
123	50	25.0	32	White	34.0	26.9	CA/CA
121	48	24.9	30	Cork	34.0	26.9	CA/CA
98	39	25.0	26	White	34.0	26.7	CA
124	37	24.5	46	Cork	32.0	26.9	CA
136	28	24.5	46	White	36.0	26.8	CA
122	23	22.7	26	White	32.0	31.8	CA
119	None	22.7	184**	White	35.0	29.8	CA
121	30	24.5	43	Cork	32.0	26.9	CA
119	26	24.8	46	Cork	31.5	27.4	CA
107	21	24.1	48	Cork	36.0	31.4	CA
109	None	25.0	101**	White	32.0	27.0	CA
116	13	25.0	42	Cork	31.7	27.5	CA
114	14	24.8	32	Cork	32.0	27.5	CA
117	13	24.9	35	White	32.0	27.4	CA
119	None	25.0	19	Cork	34.0	27.0	CA
108	56	21.1	11	White	35.0	29.8	CA
143	18	22.0	19	White	35.0	29.8	CA
108	45	22.3	14	White	35.0	29.8	CA
117	None	24.8	173**	Cork	30.0	25.0	CA/C/CA
117	None	24.7	173**	Cork	35.0	29.8	CA/C/CA

**These cigarette papers are perforated.

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MINOR BRANDS

Brand	Cigt. Length, mm	FTC Tar, mg/cigt.	Nicotine, mg/cigt.	Puffs/ cigt.	CO, mg/cigt.	Smoke Menthol, mg/cigt.
<u>FILTER - MENTHOL</u>						
Kool Menthol (MF)	70.2	19.7	1.31	6.5	12.7	0.62
Newport Lights Men. 80 (Box)	79.5	8.0	0.71	6.7	8.8	0.32
Kool Menthol 80 (Box)	79.9	14.7	1.00	7.1	13.4	0.53
Newport Menthol 80 (Box)	79.4	15.1	1.00	7.2	14.1	0.42
Triumph Menthol 85	84.0	3.9	0.35	6.8	5.3	0.26
PLAYERS MENTHOL 85 (BOX)	83.0	11.5	0.86	8.1	12.5	0.62
Newport Menthol 85 25's	84.4	15.7	1.14	7.8	15.8	0.47
Carlton Menthol 100 (Box)	98.6	1.0	0.1	8.4	0.8	0.14
Carlton Menthol 100	99.5	4.9	0.42	7.9	5.8	0.34
Triumph Menthol 100	98.9	5.6	0.47	8.1	6.9	0.36
Newport Lights Men. 100 (Box)	99.1	8.9	0.81	8.9	8.8	0.38
Silva Thins Menthol 100	99.8	10.6	0.91	9.4	9.7	0.41
Lucky Strike Menthol 100	99.5	11.0	0.89	9.9	11.3	0.70
Eve Slim Lights Men. 100 (Box)	97.6	11.4	0.93	7.7	9.5	0.40
Kool Milds Menthol 100	98.9	11.5	0.92	8.6	12.4	0.47
PLAYERS MENTHOL 100 (BOX)	98.4	13.3	1.01	9.2	12.3	0.72
Kent Menthol 100	99.2	13.4	0.98	8.9	13.9	0.43
St. Moritz Menthol 85	99.7	14.8	1.02	8.6	14.0	0.40
P.M. INTER. MEN. 100 (BOX)	98.5	16.3	1.22	10.5	15.9	0.61
B & W MENTHOL (BOX)	98.7	16.8	1.18	10.6	13.5	0.63
Spring Menthol 100	99.1	17.7	1.37	8.6	18.4	0.48
Newport Menthol 100 25's	98.7	18.0	1.33	8.7	17.3	0.47
Eve Lights Menthol 120 (Box)	120.1	13.1	1.14	13.8	11.3	0.68
Max Menthol 120	119.4	16.2	1.24	9.9	17.1	0.53
Tall Menthol 120	119.6	18.4	1.57	15.8	16.5	0.77
<u>NON-FILTER</u>						
Chesterfield	68.9	17.6	1.14	6.8	9.8	-
PLAYERS (BOX)	70.2	23.2	1.68	8.5	12.6	-
Raleigh (MF)	83.9	22.0	1.30	8.3	13.7	-
H. Tareyton	83.8	22.8	1.50	8.9	15.3	-
ENGLISH OVALS (BOX)	84.3	23.2	1.79	10.8	12.9	-
Old Gold	84.5	23.8	1.68	8.8	15.8	-

¹Filter Type: CA = Cellulose Acetate, C = Carbon

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MINOR BRANDS

Total RTD, mm of H ₂ O ²	Ventila- tion, %	Circum- ference, mm	Permeability, ml/cm ² x min. Color	Tipping Paper Length, mm	Filter Length, mm	Filter Type ¹
63	None	25.0	24	Cork	11.0	-
107	30	25.0	29	Cork	30.0	CA
121	None	25.0	32	Cork	23.0	CA
121	None	25.0	19	Cork	25.0	CA
105	58	25.0	25	Cork	32.0	25.0** CA/CA
113	20	25.1	20	Cork	32.0	27.1 CA
121	None	24.8	18	Cork	25.0	21.0 CA
80	83	24.4	45	White	35.0	26.7 CA
117	56	24.4	29	White	35.0	26.7 CA
123	47	25.0	28	Cork	34.0	26.9 CA
102	41	25.0	31	Cork	34.0	26.8 CA
115	29	22.3	48	White	32.0	26.9 CA
123	31	24.6	50	Cork	32.0	27.0 CA
116	None	22.7	205*	White	35.0	29.9 CA
123	22	24.8	23	Cork	36.0	29.1 CA
106	22	24.3	48	Cork	36.0	31.4 CA
126	13	25.0	37	White	34.0	26.8 CA
104	None	25.1	173*	White	32.0	27.1 CA
118	12	24.9	32	Cork	32.0	27.5 CA
112	16	24.8	33	White	32.0	27.4 CA
116	None	25.0	16	Cork	34.0	27.0 CA
123	None	24.9	14	Cork	34.0	27.0 CA
106	57	21.2	10	White	35.0	29.9 CA
144	17	22.0	18	White	35.0	29.8 CA
136	36	22.4	15	White	35.0	29.8 CA
69	-	24.9	47	-	-	-
93	-	24.9	27	-	-	-
77	-	24.9	24	-	-	-
96	-	25.0	26	-	-	-
102	-	25.0	44	-	-	-
78	-	25.0	21	-	-	-

*These cigarette papers are perforated.

**Contains carbon.

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COUPON BRANDS

Two companies utilize coupons on their brands:

BROWN & WILLIAMSON¹

Belair (85 & 100)
Raleigh Filter (85 & 100)
Raleigh Nonfilter (85)
Raleigh Lights (85 & 100)

LIGGETT GROUP

Chesterfield Nonfilter (70 & 85)
Chesterfield Filter 85

Philip Morris, American, Lorillard and Reynolds
do not use coupons on any of their brands.

¹These brands contain 2 coupons per pack and 8 coupons in the carton.

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PLEASE NOTE

THE APPENDIX SECTION WHICH INCLUDES THE SUMMARY OF BRAND CHANGES, THE DESCRIPTION OF DATA REPORTED, AND EXPERIMENTAL PROCEDURES HAS BEEN UPDATED IN THIS REPORT.

PLEASE RETAIN THIS COPY FOR A REFERENCE AS THESE SECTIONS WILL NOT BE INCLUDED AGAIN UNTIL JULY, 1990. THIS WILL SAVE A CONSIDERABLE AMOUNT OF PAPER AND EFFORT BY NOT INCLUDING THE APPENDIX SECTION IN EACH MONTH'S REPORT.

THE SUMMARY OF COMPETITIVE BRAND CHANGES IS ARRANGED ALPHABETICALLY BY COMPANY. ALSO, THE BRANDS ARE LISTED ALPHABETICALLY FOR YOUR CONVENIENCE IN LOCATING A SPECIFIC BRAND.

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APPENDIXSUMMARY OF COMPETITIVE BRAND CHANGES OBSERVED SINCE APRIL, 1960A. AMERICAN BRANDSAMERICAN BRAND 80

85 mm - Test marketed in soft pack (85 mm) - No unusual characteristics.

4/71

Discontinued.

AMERICAN BRAND 85

85 mm - Test marketed in soft pack (85 mm) - No unusual characteristics.

4/71

Discontinued.

AMERICAN FILTERS 85

Test marketed in Illinois - This value entry brand delivers 16 mg tar and 1.1 mg nicotine - packaged in a red pack.

5/89

AMERICAN FILTERS 100

Test marketed in Illinois - This value entry brand delivers 16 mg tar and 1.1 mg nicotine - packaged in a red pack.

5/89

AMERICAN LIGHTS 85

Test marketed in St. Louis, Missouri. Delivers 12 mg tar and 0.9 mg nicotine. This is a value entry product.

9/88

AMERICAN LIGHTS 100

Test marketed in St. Louis, Missouri. Delivers 11 mg tar and 0.9 mg nicotine. This is a value entry product.

9/88

AMERICAN LIGHTS 100 MENTHOL

Distributed in Virginia - delivers 11 mg tar, 0.9 mg nicotine and 0.6 mg smoke menthol - branded generic.

11/89

AMERICAN LIGHTS 120

Plain - Introduced 120 mm cigarette with a 40 mm CA filter and a tipping paper length of 45 mm - Tar (8 mg) lower than any 120 mm entry to date.

4/76

Discontinued.

AMERICAN LIGHTS MENTHOL 120

Menthol - Introduced 120 mm cigarette with a 40 mm CA filter and a tipping paper length of 45 mm - Tar (9 mg) lower than any 120 mm entry to date.

4/76

Discontinued.

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AMERICAN LONGS 120

Plain - Introduced 120 mm cigarette with a white cigarette paper - 30 mm CA filter - Tar (19 mg) and nicotine (1.5 mg) deliveries.

9/75

Discontinued.

AMERICAN LONGS MENTHOL 120

Menthol - Introduced 120 mm cigarette with a white cigarette paper - 30 mm CA filter - Tar (16 mg) and nicotine (1.3 mg) deliveries.

9/75

Discontinued.

AMERICAN OVALS 100

100 mm cigarette with 25 mm CA filter made like a normal cigarette and pressed into its oval shape.

6/69

Discontinued.

BERMUDA 85

Test marketed - king size - 20 mm CA filter, high TPM, low RTD.

5/65

Discontinued.

BRIGHTON 85

Test marketed - king size - dual filtered mentholated - similar to Montclair.

4/65

Discontinued.

BRIGHTON CONVERTIBLE MENTHOL 100

Same as Tennyson Menthol 100 - Introduced in test market.

4/68

Discontinued.

BRIGHTON PINCH MENTHOL 100

Similar to previously introduced Brighton Convertible Menthol 100 and Tennyson Menthol 100.

11/68

Discontinued.

BULL DURHAM 85

Introduced - king size with larger circumference than normal cigarettes - 20 mm CA filter.

6/66

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CARLTON 70

70 mm cigarette with 25 mm CA filter - Tar (0.7 mg), nicotine (0.15 mg). Data noted on pack "Tar" = 3 mg - Nicotine = 0.3 mg.

5/69

Increased filter ventilation, a more porous cigarette paper and a smaller circumference lowered tar to 1 mg and nicotine to 0.1 mg deliveries.

1/76

Expanded tobacco introduced at 35% level; reconstituted tobacco level decreased (25 to 18%).

9/76

Discontinued.

CARLTON 85

Introduced - king size, dual filter with paper inner filter containing 3 mg of carbon - paper perforated immediately in front of tipping paper - TPM (8 mg), nicotine (0.3 mg) - Package label states: "Tar" = 2.5 mg, Nicotine = 0.4 mg.

1/64

TPM and nicotine reduced by changing to filter ventilation - Package label states: "Tar" = 2.7 mg, Nicotine = 0.3 mg.

5/64

TPM (3 mg) and nicotine (0.2 mg) increased - less efficient filter - Package label states: "Tar" = 3.9 mg and Nicotine = 0.4 mg.

10/64

TPM and nicotine deliveries increased by changing filter ventilation - "Tar" and nicotine data no longer stated on label.

1/65

TPM, nicotine and organic gas phase deliveries increased - Changes observed in total RTD, fiber denier and tobacco weight - Alkaloids increased slightly.

5/65

Total RTD decreased.

4/66

TPM and nicotine decreased - Filter efficiency increased as result of fiber denier changed.

5/66

"Tar" and nicotine data stated on package label. "Tar" = 9.5 mg and nicotine = 0.6 mg.

6/66

TPM and nicotine decreased, 2 mg and 0.1 mg by increasing ventilation. Data on pack changed - "Tar" = 9 mg and nicotine = 0.6 mg.

10/66

Data on pack changed - "Tar" = 7 mg and Nicotine = 0.5 mg. Tar (2 mg) and nicotine (0.2 mg) decreased by increase in filter ventilation.

4/67

10/67

Tar (1 mg) and nicotine (0.1 mg) increased by changes in fiber shape and fiber denier.

12/67

A model of Carlton with 25 mm CA filter introduced with tar of 2.0 mg.

2/69

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CARLTON 85 (cont.)

Filter change from 20 mm dual filter to 25 mm CA filter. 7/69

Tar (4 to 1 mg) and nicotine (0.4 to 0.2 mg) reduced by increased filter ventilation and lowering tobacco weight - Expanded tobacco content increased from 0 to 42%. 3/76

CARLTON 85 (BOX)

Cigarettes packaged in a flip top box to replace the 70 mm Carlton cigarettes already on the market. Similar to Carlton 85 soft pack cigarettes. Tar (1 mg) and nicotine (0.1 mg) listed on pack. 1/77

Tar (<1.0 to <0.01 mg) and nicotine (0.1 to 0.002 mg) data listed on pack changed as indicated. 3/81

Ventilation was changed from four to six rows of laser perforation. Paper porosity changed from 14 to 7 sec. Both tar and nicotine deliveries of these cigarettes remains at 0.00 mg. 8/81

Name changed to Ultra Carlton. 7/88

CARLTON MENTHOL 85

Introduced - Mentholated version of Carlton 85 plain. 1/72

Tar (4 to 1 mg) and nicotine (0.4 to 0.1 mg) reduced by increased filter ventilation and lowering tobacco weight - Expanded tobacco content increased from 0 to 45%. 2/76

New package graphics. 7/88

CARLTON 100'S

National distribution - low tar (6 mg) and nicotine (0.5 mg) achieved by a 27 mm CA filter containing ventilation (52%). A low tobacco weight and rod density resulted from high RT content (35%). Tar (5 mg) and nicotine (0.5 mg) listed on pack. 4/77

Lower tar (5.9 to 4.4 mg) and nicotine (0.5 to 0.4 mg) deliveries resulted from a change to a more porous cigarette paper. 11/77

Lower tar (5 mg), nicotine (0.4 mg) and CO (5 mg) deliveries resulting from higher ventilation - lower total RTD. 1/86

New package graphics. 7/88

CARLTON 100 (BOX)

Introduced - Tar (0.8 mg) and nicotine (0.08 mg) - Ultra low delivery result of high filter ventilation (84%). 4/80

New package graphics. 7/88

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A5

CARLTON MENTHOL 100 (Box)

Introduced in Texas - Tar (1.0 mg) and nicotine (0.1 mg) -
similar to Carlton 100 (Box). 1/82

National distribution. 7/85

New package graphics. 7/88

CARLTON MENTHOL 100

Introduced on test market - Low delivery (4 mg tar and
0.4 mg nicotine) mentholated cigarettes similar to
Carlton 100 cigarettes previously introduced. Blend
contains 33% ET. 11/77

New package graphics. 7/88

CARLTON SLIMS DELUXE 100 (BOX)

National distribution-delivers 7 mg tar and 0.6 mg nicotine. 1/84

CARLTON SLIMS DELUXE MENTHOL 100 (BOX)

National distribution-delivers 7 mg tar and 0.6 mg nicotine. 1/84

CARLTON 120

Introduced - test market - Tar (7.2 mg) and nicotine
(0.61 mg). The blend contains 34% expanded tobacco -
ventilation system consists of two rows of laser perforation. 7/81

New package graphics. 7/88

CARLTON MENTHOL 120

Introduced - test market - Tar (6.4 mg) and nicotine
(0.59 mg). The ventilation system consists of two rows
of laser perforation. 8/81

Tar (5.9 to 7.4 mg), nicotine (0.57 to 0.77 mg), and CO
(4.5 to 6.6 mg) increased - ventilation (37 to 28%)
decreased. 11/82

New package graphics. 7/88

COLD HARBOR 85

Introduced - king size in soft pack - similar to Waterford
with menthol added to filler. 6/66

Discontinued.

COLONY FILTER 85

Introduced - One of the first American Tobacco brands with
coupons - 20 mm CA filter. 9/66

Discontinued.

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A6

COLONY MENTHOL 85

Introduced - One of the first American Tobacco brands with coupons - 20 mm CA filter.

9/66

Discontinued.

COLONY FILTER 100

Introduced - 100 mm cigarette with 20 mm CA filter.

5/67

Discontinued.

COLONY MENTHOL 100

Introduced - 100 mm cigarette with 20 mm CA filter.

5/67

Discontinued.

COMPASS 85

Test marketed - king size mentholated - 20 mm CA filter.

6/65

Discontinued.

DOUBLE EIGHT 88

Double Eight, 88 mm long, replaced Pall Mall 88 on the market - Packaged in a black and white striped pack.

7/68

Discontinued.

FIFTY-FIFTY 100

Introduced - 100 mm cigarette with 45 mm CA filter.

2/67

Tar (5 mg) and nicotine (0.2 mg) increased by changes in cigarette paper.

10/67

Discontinued.

FRESH CONVERTIBLES 100

Similar to Tennyson Convertible Menthol 100, plug-space-plug filter, with capsules containing menthol and carbon granules in space.

9/69

Discontinued.

H. TAREXTON 85 (NZ)

Removed from C.I. tables. History of brand in C.I. 5/64.

11/63

Chloride type paper component used.

4/63

TPM and nicotine deliveries reduced.

6/63

TPM reduced by 4 mg as a result of changes in paper porosity, paper component and fiber denier.

3/64

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AMERICAN TOBACCO COMPANY

A7

HALF & HALF 85

Introduced - king size in soft pack with "pipe tobacco blend".

5/64

ICEBERG 10 MENTHOL 85

Low delivery (10 mg tar and 0.8 mg nicotine) with new Filtrona filter - Mentholated cigarette. Blend contains expanded tobacco (4%) and expanded RKS (3%).

5/72

Discontinued.

ICEBERG MENTHOL 100

Test marketed - 100 mm mentholated cigarette with a 30 mm "Filtrona-type" filter similar to the one used on Lucky Ten 100. Blend contains expanded tobacco and stems.

2/74

Cigarette re-engineered - Tar (10 to 5 mg) and nicotine (0.7 to 0.3 mg) decreased. Filtrona-type filter replaced by standard CA filter with 47% ventilation.

7/76

LTC 85

LTC (low tar cigarette) - similar to Lucky Ten in all characteristics.

8/71

Discontinued.

LONG JOHN'S 120

Introduced 120 mm cigarette with brown paper colored with azo dyes. Circumference 22.5 mm. Tar (20 mg) and nicotine (1.7 mg) deliveries.

5/75

Discontinued.

LONG JOHN'S MENTHOL 120

Introduced 120 mm menthol cigarette with brown paper colored with azo dyes. Circumference 22.5 mm. Tar (17 mg) and nicotine (1.4 mg) deliveries.

5/75

Discontinued.

LUCKY 100'S

Introduced - Similar to previously marketed Lucky Ten 100 - 30 mm "Filtrona" filter.

6/74

Cigarette re-engineered - Tar (10 to 5 mg) and nicotine (0.8 to 0.4 mg) decreased. Filtrona-type filter replaced by standard CA filter with 47% ventilation.

7/76

Discontinued.

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A0

LUCKY FILTERS 100

Introduced - 100 mm cigarette with a 20 mm dual filter; 10 mm crimped tobacco with carbon and 10 mm CA filter.	3/67
Filter length (20 to 25 mm) increased, tar lower by 1 mg.	7/68
Name changed - Lucky Strike 100 to Lucky Filters 100.	8/68
Coupon added to pack.	6/69
Filter change from 25 mm dual filter to 25 mm CA filter, cigarette paper porosity change (12 to 21 seconds), tar (1 mg) and nicotine (0.1 mg) increased.	9/69
Reconstituted tobacco decreased (20 to 15%).	10/69
Discontinued.	

LUCKY FILTERS (POLYMER) - 85

85 mm version of Lucky Filters, with a new polymer filter, was introduced. The twenty-five (25) mm filter consists of a CA-space-CA (10-5-10) with the space containing approximately 100 mg of polyethylene and alumina.	9/68
Discontinued.	

LUCKY FILTERS (POLYMER) - 100

100 mm version of Lucky Filters, with a new polymer filter, was introduced. The twenty-five (25) mm filter consists of a CA-space-CA (10-5-10) with the space containing approxi- mately 100 mg of polyethylene and alumina.	9/68
Discontinued.	

LUCKY STRIKE 70 (NF)

Paper porosity and paper component increased - TPM reduced by 5 mg.	1/62
TPM increased by 2 mg.	7/62
TPM increased by 1 mg.	12/62
TPM decreased by 1.5 mg.	6/63
TPM decreased by 2 mg by changing paper component and porosity.	5/64
Reconstituted tobacco content increased (7 to 11%).	4/66
Circumference and tobacco weight decreased.	9/66
TPM and nicotine increased, 6 mg and 0.2 mg respectively, by changing paper component, citrate to phosphate, and decreasing paper porosity.	10/66

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LUCKY STRIKE 70 (NF) (cont.)

Reconstituted material increased 9 to 12%.	9/68
Reconstituted material increased 12 to 17%.	10/70
Expanded tobacco added to blend (4%).	1/72
Expanded tobacco increased 4 to 6%.	1/74
Lower tar (1 mg) and nicotine (0.1 mg) correlating with a lower filler rod TPM.	11/75
Tar delivery (27 to 25 mg) decreased by increase in paper porosity.	2/76

LUCKY STRIKE FILTER 80

Plain - Test marketed in a soft pack - First 80 mm cigarette in a soft pack in the U.S. - High tar (26 mg) and nicotine (1.6 mg) correlating with a low filtration efficiency. 12/75

Discontinued.

LUCKY STRIKE FILTER 85

Test marketed - king size triple filter (CA; carbon on CA; CA) - filter has gas phase activity.	8/64
Test marketed with 20 mm CA filter - high TPM.	11/64
TPM (2 mg) and nicotine (0.1 mg) decreased by increase in filter efficiency.	11/66
TPM (2 mg) and nicotine (0.1 mg) decreased by increase in paper porosity.	12/66
TPM reduced by a filter change from single CA to dual filter - Dual filter consisted of inner filter made from crimped tobacco sheet with embedded carbon and an outer CA filter.	9/67
Change from 20 mm dual filter to 20 mm CA filter.	8/69
Reconstituted tobacco increase (14 to 18%).	4/70
Tar (3 mg) and nicotine (0.3 mg) increased as result of blend change.	5/70
Discontinued.	12/71

LUCKY STRIKE 85

Introduced - test market - delivers 11.6 mg tar and 0.94 mg nicotine. The cigarette length is 83 mm. American Brands has no other 85 mm cigarette in the 10-12 mg tar category.	11/81
Expanded stems removed and reconstituted tobacco increased (20%) in blend - no changes in smoke deliveries.	5/86

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LUCKY STRIKE 85 (BOX)

Introduced - test market - delivers 11.2 mg tar and 0.88 mg nicotine. The ventilation consists of one row of laser perforation. The cigarette length is 83 mm. American Brands has no other 85 mm cigarette in the 10-12 mg tar category.

11/81

Tar (12 to 13 mg), nicotine (0.9 to 1.0 mg) and CO (12 to 14 mg) deliveries increased as a result of lower ventilation (19 to 14%).

9/89

LUCKY STRIKE MENTHOL 85

Introduced - 85 mm mentholated cigarette with 20 mm CA filter.

6/66

Discontinued.

12/68

Re-introduced nationally - delivers 11 mg tar, 0.8 mg nicotine and 0.6 mg smoke menthol.

5/86

LUCKY STRIKE 100

Introduced in February 1984 delivers 11 mg tar and 1 mg nicotine.

3/84

LUCKY STRIKE MENTHOL 100

Introduced - 100 mm mentholated cigarette with 20 mm CA filter.

4/67

TPM (2 mg) and nicotine (0.2 mg) decreased by changing to a more porous paper.

5/67

Filter length (20 to 25 mm) increased, tar lower (1 mg).

7/68

Discontinued.

12/68

Reintroduced-delivers 10 mg tar, 0.8 mg nicotine and 0.8 mg smoke menthol-24 mm circumference.

11/85

National

3/86

LUCKY STRIKE LIGHTS 85

Introduced - delivers 7 mg tar - has the shortest cigarette length of any king size cigarette in a soft pack.

11/83

LUCKY STRIKE LIGHTS 100

Introduced - delivers 9 mg tar.

11/83

LUCKY TEN 85

Low delivery (10 mg tar and 0.8 mg nicotine) with new Filtrona filter - Blend contains expanded tobacco (5%).

8/71

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LUCKY TEN 85 (cont.)

A decrease in tar (9 to 8 mg) resulting from a change in filters from a 25 mm Filtrona-type filter to a 25 mm standard CA filter containing ventilation (35%). Lower total RTD noted.

4/77

Discontinued.

12/77

LUCKY TEN 100

Test marketed - 30 mm Filtrona filter with triangular openings at each end and constricted in the middle. 5% expanded tobacco. Tar (9 mg) and nicotine (0.9 mg) listed on pack.

4/73

Discontinued.

12/77

MALIBU 85

National distribution - delivers 17 mg tar and 1.2 mg nicotine. 9/88

MALIBU MENTHOL 85

National distribution - delivers 16 mg tar, 1.2 mg nicotine, and 0.7 mg smoke menthol.

9/88

MALIBU LIGHTS 85

National distribution - delivers 9 mg tar and 0.7 mg nicotine. 9/88

MALIBU 100

Test marketed in New Hampshire, Peoria and Spokane - first value entry - delivers 11 mg tar and 1 mg nicotine.

3/87

MALIBU MENTHOL 100

Test marketed in New Hampshire, Peoria and Spokane - first value entry - delivers 11 mg tar, 1 mg nicotine and 0.6 mg smoke menthol.

3/87

MALIBU LIGHTS 100

Test marketed in New Hampshire, Peoria and Spokane - first value entry - delivers 9 mg tar and 0.8 mg nicotine.

3/87

MALIBU ULTRA LIGHTS 100

Distributed nationally as a branded generic - delivers 6 mg tar and 0.5 mg nicotine - packaged in a yellow pack.

9/88

MARYLAND 100

100 mm cigarette with 100% air-cured tobacco - No RKS or reconstituted material.

3/70

Discontinued.

12/71

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A12

MARYLAND MENTHOL 100

100 mm mentholated cigarette with 100% air-cured tobacco -
Contains no reconstituted material or RKS.

10/70

Discontinued.

12/71

MERMAID MENTHOL 100

Test marketed - 25 mm CA filter - Blend contains RKS which
has been processed to give an expanded appearance.

11/71

Discontinued.

MISTY LIGHTS 100 (BOX)

Test marketed in California and Louisiana - delivers 8 mg
tar and 0.7 mg nicotine - will sell for the full price
in California and will sell for the generic price in
Louisiana.

9/89

MISTY LIGHTS 100 MENTHOL (BOX)

Test marketed in California and Louisiana - delivers 8 mg
tar, 0.7 mg nicotine and 0.5 mg smoke menthol - will sell
for the full price in California and for the generic
price in Louisiana.

9/89

MONTECLAIR 85

Introduced - mentholated! dual filter, carbon section -
released menthol, which is concentrated there, as TPM is
picked up - has no gas phase activity.

3/62

TPM, nicotine, and menthol deliveries increased.

8/62

Paper component identified as chloride type.

4/63

TPM and nicotine', deliveries increased by changing filter
ventilation - "Tar" and nicotine data no longer stated on
label.

1/64

TPM reduced 7 mg as result of a new filter and filter
ventilation - Package label states: "Tar" = 5.2 mg,
Nicotine = 0.5 mg.

5/64

TPM reduced 5 mg. Nicotine delivery also decreased, RTD
increased. TPM reduced 4 mg by changing paper component
and porosity.

6/64

Carbon type changed, coconut to coal.

10/64

TPM (4 mg) and nicotine (0.2 mg) increased, less efficient
filter - Package label states: "Tar" = 6.9 mg, Nicotine =
0.7 mg.

11/64

Menthol content and delivery increased.

8/65

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MONTCLAIR 85 (cont.)

Menthol content and delivery increased.	7/66
TPM (2 mg) decreased by increasing filter ventilation.	5/67
TPM (4 mg) and nicotine (0.2 mg) decreased by changes in filter ventilation, filter efficiency, and paper porosity.	6/67
Coupon added to pack.	9/67
Circumference decreased (25.2 to 24.9 mm); lower tobacco weight noted.	12/68
Reconstituted tobacco content increased (20 to 36%).	4/69
Change from 20 mm dual filter to 20 mm CA filter.	8/69
Reconstituted tobacco decreased (36 to 28%).	10/69
Tar (6 mg) and nicotine (0.5 mg) increased by elimination of filter ventilation, change to less porous paper. Reconstituted tobacco decreased (28 to 19%).	4/70
Reconstituted tobacco increased (19 to 25%).	9/71
Expanded tobacco added to blend (3%) - Higher filler menthol and menthol delivery noted.	2/73
Expanded stems added to blend (12%) and reconstituted material decreased from 17 to 8% - No change in smoke deliveries.	3/73
Expanded tobacco removed from blend. Tar (1 mg) and nicotine (0.1 mg) decreased - Alkaloids and sugars lower.	2/75
Discontinued.	12/75
<u>PALL MALL 85 (NF)</u>	
Paper porosity and RTD increased; TPM and nicotine deliveries reduced (3 mg and 0.1 mg).	4/63
Nicotine delivery reduced slightly.	6/63
TPM and nicotine reduction, 6 mg and 0.2 mg respectively, by changing paper component, phosphate to citrate, and increasing paper porosity.	1/64
TPM and nicotine increased, 7 mg and 0.3 mg respectively, by changing paper component, citrate to phosphate, and decreasing paper porosity.	10/66
Reconstituted material increased, 9 to 12%.	4/67
TPM (6 mg) and nicotine (0.2 mg) decreased by changing paper additive and increasing paper porosity.	5/67
Expanded tobacco added to blend (2%).	1/73

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PALL MALL 85 (NF) (25's)

Expanded tobacco increased from 2 to 6%. 1/74

Expanded stems added to blend (3%). 9/75

Lower tar (1 mg) and nicotine (0.1 mg) correlating with a lower filler rod TPM. 11/75

Lower tar (25 to 23 mg) and nicotine (1.5 to 1.4 mg) deliveries resulting from a change to a more porous cigarette paper. 6/79

Cigarette length (84.8 to 83.7 mm) decreased. 8/82

Test marketed in Rhode Island - contains 25 cigarettes per pack - similar to Pall Mall 85 (NF) - 200 cigarettes per carton - cigarettes packed in an 8-9-8 configuration in the pack. 5/85

National Distribution. 5/86

PALL MALL "UNFILTERED" LIGHTS 85 (32)

Test market - Rhode Island - delivers 14 mg tar, 1 mg nicotine and has a tobacco filter with porous plugwrap and two rows of laser perforation. The tobacco filter blend (24% reconstituted tobacco, 11% expanded stems and 39% expanded tobacco) is different from the blend of the tobacco column. 9/86

PALL MALL 88

Pall Mall cigarettes, 88 mm long, introduced in white pack with gold lettering. 5/68

Discontinued.

PALL MALL 100

Plain - Test marketed in new air tight hermetically sealed "polyfoil pak." 10/74

Free expanded tobacco has been added at the 9% level resulting in a lower tobacco weight (0.905 to 0.865 g). 7/81

Ventilation was incorporated (11%) resulting in lower tar (16 to 15 mg), nicotine (1.2 to 1.1 mg) and CO (16 to 13 mg) deliveries. 7/89

Ventilation removed resulting in higher tar (15 to 17 mg), nicotine (1.1 to 1.2 mg) and CO (14 to 15 mg) deliveries. 11/89

PALL MALL MENTHOL 100

Menthol - Test marketed in new air tight hermetically sealed "polyfoil pak." 10/74

Discontinued.

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A13

PALL MALL EXTRA MILD 80

Low delivery (9 mg tar and 0.7 mg nicotine) with new
Filtrona molded filter - Blend contains expanded tobacco
(40) - Similar to Lucky Ten 85 in most characteristics.

7/72

Discontinued.

12/77

PALL MALL EXTRA LIGHT 85

85 mm cigarette similar to 80 mm version previously
introduced in 7/72.

8/72

Tar (6 mg) and nicotine (0.7 mg) decreased - Filtrona filter
with no ventilation was replaced by a standard CA filter with
45% ventilation. Tobacco weight and rod density were higher
as result of elimination of ET from blend.

6/76

PALL MALL EXTRA LIGHT 85

Brand name changed from Pall Mall Extra Mild 85 to Pall Mall
Extra Light 85. No changes in smoking or physical
characteristics. Tar delivery listed on pack as
"7 mg or Less".

4/78

PALL MALL FILTER 80 (BOX)

Test marketed in hard box (80 mm) - Tar (19 mg) and nicotine
(1.2 mg) deliveries.

5/71

Reintroduced - plain - test marketed in a red flip top box
similar in color and design to the soft pack used for Pall
Mall 85 Nonfilter cigarettes - High tar (24 mg) and nicotine
(1.3 mg) deliveries correlating with a low filtration
efficiency.

12/75

Discontinued.

PALL MALL FILTER 85

Test marketed in soft pack (85 mm) - Tar (20 mg) and
nicotine (1.3 mg) deliveries.

5/71

Reintroduced - plain - test marketed in a red soft pack
similar to that used for Pall Mall 85 Nonfilter cigarettes -
Filter RTD extremely low resulting in a low filtration
efficiency - Tar (25 mg) and nicotine (1.6 mg) deliveries.

10/75

Tar (25 to 18 mg) and nicotine (1.6 to 1.2 mg) decreased
as result of a longer (17 to 20 mm), more efficient filter.

12/76

PALL MALL FILTER LIGHTS 85

The incorporation of ventilation (144) and a change to a
more porous cigarette paper resulted in lower tar (16 to
13 mg), nicotine (1.2 to 1.0 mg) and CO (16 to 12 mg)
deliveries. The pack has been modified by adding a blue
banner to the design.

11/86

2031438424

PALL MALL FILTER 95

Introduced - 95 mm long cigarette in gold crush-proof box with hinge top - 15 mm CA filter. 3/66

Tar (6 mg) and nicotine (0.3 mg) reduced by increasing filter length (15 to 25 mm) and tipping paper (21 to 30 mm). 2/68

Brand discontinued - Replaced with 100 mm size in crush-proof box. 3/71

Discontinued.

PALL MALL FILTER MENTHOL 95

Introduced - 95 mm long in new type package - mentholated - 15 mm CA filter. 11/65

Tipping paper increased (19 to 21 mm). 7/67

Tar (6 mg) and nicotine (0.2 mg) reduced - single package comprised of twin crush-proof boxes - one box contains ten mentholated and the other ten non-mentholated cigarettes. 2/68

Discontinued.

PALL MALL FILTER 100

Test marketed - 100 mm long - Same as Pall Mall nonfilter with 15 mm CA filter. 10/64

TPM (5 mg) and nicotine (0.2 mg) decreased by an increase in filter efficiency. 11/66

Tipping paper increased 19 to 21 mm. 2/67

Reconstituted material increased 9 to 12%. 4/67

TPM (3 mg) decreased by increasing filter length (17 to 20 mm) and by increasing paper porosity. 5/67

Tar (2 mg) and nicotine (0.3 mg) reduced by increases in filter length (20 to 25 mm) and tipping paper (24 to 30 mm). 10/67

Circumference decreased (24.7 to 24.4 mm) and tobacco weight decreased, no change in tar or nicotine. 11/68

Tar (1 mg) and nicotine (0.1 mg) reduced by an increase in filter efficiency - High total and filter RTD noted. 10/70

Filter length (25 to 27 mm) and tipping paper (30 to 32 mm) increased - No change in smoke deliveries. 3/74

Addition of 3% ES to blend. 4/75

Discontinued.

Introduced in Atlanta, Georgia - delivers 14 mg tar and 1 mg nicotine - packaged in a red pack with a blue banner. 5/87

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FALL MALL FILTER MENTHOL 100

Introduced - 100 mm mentholated cigarette with 15 mm CA filter. 10/66

Tipping paper increased (19 to 21 mm). 2/67

TPM (2 mg) decreased by increasing filter length (17 to 20 mm) and by increasing paper porosity. 5/67

Tar (2 mg) and nicotine (0.3 mg) reduced by increases in filter length (20 to 25 mm) and tipping paper (24 to 30 mm). 10/67

Tar (1 mg) and nicotine (0.1 mg) reduced by a blend change. 3/68

Circumference decreased (24.9 to 24.6 mm) and tobacco weight decreased, no change in tar and nicotine. 11/68

Tar (1 mg) and nicotine (0.1 mg) increased by changes in blend and heavier tobacco weight; smoke and filler menthol decreased. 10/69

Reconstituted tobacco decreased (22 to 17%). 10/69

Reconstituted tobacco increased (16 to 21%). 10/70

Addition of expanded RKS (11%) and expanded tobacco (3%) to blend - Reconstituted tobacco content reduced (21 to 7%). Alkaloids increased and fiber shape changed from X to Y - shape. Total and filter RTD increased. 5/72

Expanded tobacco removed from blend. Tar (1 mg) and nicotine (0.1 mg) decreased. Alkaloids and sugars lower. 2/73

Discontinued.

FALL MALL FILTER 100 (BOX)

Plain - This new 100 mm cigarette in a crush-proof box replaces the previously marketed Fall Mall 95 cigarettes in a flat twin pack. 4/71

Discontinued.

FALL MALL FILTER MENTHOL 100 (BOX)

Menthol - This new 100 mm cigarette in a crush-proof box replaces the previously marketed Fall Mall 95 cigarettes in a flat twin pack. 4/71

Discontinued.

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2031438426

PALL MALL LIGHTS 100'S

Introduced - 100 mm low tar (12 mg) and nicotine (1.0 mg) brand characterized by 27 mm filter with 24% ventilation. Blend contains 8% expanded tobacco and 2% expanded stems. 7/78

Tar (10.6 to 8.1 mg), nicotine (0.94 to 0.74 mg) and CO (10.3 to 7.6 mg) reduced - increase in filter ventilation (28 to 47%) decrease in filter RTD (4.6 to 3.6). 2/81

Tar (8.4 to 10.9 mg), nicotine (0.8 to 1.0 mg) and CO (8 to 10 mg) increased due to reduced ventilation (53 to 36%) - total RTD increased (3.2 to 4.2). 7/83

CO (10 to 12 mg) delivery increased due to decreased filter ventilation (37 to 23%) - higher filter RTD (3.0 to 4.2 in. N20) correlated with higher efficiency (48 to 54%). 1/84

Tar (10.3 to 9.3 mg) and CO (12.1 to 10.4 mg) decreased - ventilation increased (22 to 28%). 9/84

PALL MALL LIGHT MENTHOL 100'S

Introduced - 13 mg tar and 1.1 mg nicotine - Blend contains 12% expanded tobacco and 12% expanded stems. Cigarette has mechanically perforated cigarette paper and no ventilation. 4/79

PINNACLE 85

New 85 mm cigarette with 25 mm geometrically shaped filter similar to that on Vantage (RJR); however, filter is reversed. 9/70

Discontinued.

PINNACLE MENTHOL 85

Test marketed - king size - dual filtered mentholated - tobacco blend markedly different. 4/65

Discontinued.

SAFARI 100

Test marketed - 100 mm cigarette with 25 mm CA filter. New type package - pouch pack with fin seals. 1/73
Discontinued.

SILVA THINS 100

100 mm cigarette with 20 mm CA filter; small circumference (22 mm) and 26% reconstituted material. 9/67

Reconstituted tobacco decreased (26 to 13%) and paper porosity increased - No change in smoke deliveries. 5/68

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AMERICAN TOBACCO COMPANY

A19

SILVA THINS 100 (cont.)

Blend changed as indicated by higher alkaloids and a
markedly lower reducing sugar - The nicotine delivery
(0.1 mg) was increased by this change. 7/70

Expanded stem added to blend at 10% level and reconstituted
tobacco content reduced 18 to 11% - Filter changed from
20 mm paper to 25 mm CA. Lower tobacco weight and rod
density noted. Tar decreased (2 mg). 2/72

Expanded stem content increased (10 to 16%). 3/73

Lower tar (16 to 12 mg) and nicotine (1.2 to 1.1 mg)
deliveries resulting from introduction of filter ventilation
(30%). Increases in filter length (25 to 27 mm) and
tipping paper length (30 to 32 mm) were also noted. 8/77

The addition of 4% ET - ES increased from 8 to 16%
resulting in a lower tobacco weight. 5/82

Tar (11 to 12 mg) and CO (10 to 11 mg) increased as a result
of lower ventilation (30 to 20 %). 11/85

SILVA THINS 100 (BOX)

Test marketed - delivers 10 mg tar, 0.8 mg nicotine and has
longer filter, longer tipping paper length, larger circum-
ference and less porous cigarette paper than the Soft Pack. 3/86

SILVA THINS MENTHOL 100

100 mm cigarette with small circumference - Similar to
Silva Thins Plain in all characteristics except for menthol. 8/68

Blend changed as indicated by higher alkaloids and lower
reducing sugars. Filler rod TPM increased (2 mg) and tar
delivery increased (1 mg). 9/71

Filter length increased 20 to 25 mm - No change in
smoke deliveries. 5/74

Lower tar (15 to 12 mg) and nicotine (1.1 to 1.0 mg)
deliveries resulting from introduction of filter ventilation
(30%). Increases in filter length (25 to 27 mm) and
tipping paper length (30 to 32 mm) were also noted.
Introduced expanded stem at 3% level. 8/77

Lower tar (12 to 7 mg) and nicotine (1.0 to 0.8 mg)
deliveries correlating with a more efficient filter and
a lower filler rod TPM. 5/79

Tar (7 to 11 mg) and nicotine (0.8 to 1.0 mg) increased
by a decrease in filter ventilation. 8/79

Changed the filter from 27 mm paper to 27 mm CA -
Tar (11 to 12 mg) and nicotine (0.9 to 1.1 mg) increased
as result of less efficient filter. 5/80

2031438428

SILVA THINS MENTHOL 100 (cont.)

The addition of 48 ET - ES increased from 8 to 164 resulting in a lower tobacco weight.

5/82

Tar (11 to 12 mg) and CO (10 to 11 mg) increased as a result of lower ventilation (30 to 20%) - higher smoke menthol delivery (0.4 to 0.5 mg).

11/85

SILVA THINS MENTHOL 100 (BOX)

Test marketed - delivers 10 mg tar, 0.8 mg nicotine and 0.4 mg smoke menthol and has a longer filter, longer tipping paper length, larger circumference and less porous cigarette paper than the Soft Pack.

3/86

SUPER M MENTHOL 100

Test marketed - 100 mm mentholated cigarette in new air tight hermetically sealed "polyfoil pak" - Same pack as used on Safari 100.

5/74

Discontinued.

SNEET CAPORAL 85

Introduced - king size with 20 mm CA filter.

10/65

Discontinued.

TALL 120

Plain - Introduced 120 mm cigarette with 30 mm CA filter - White stripped cigarette paper - Tar (19 mg) and nicotine (1.4 mg) deliveries.

8/75

Tar (18 to 21 mg), nicotine (1.6 to 1.7 mg), and CO (20 to 21 mg) increased - ventilation reduced (36 to 30%).

9/83

Lower tar (19 to 17 mg), nicotine (1.6 to 1.5 mg) and CO (19 to 17 mg) deliveries resulted from an increased filter ventilation (36 to 45%). A lower puff count (15 to 14) and a lower total RTD (133 to 108 mm) were also observed.

9/89

TALL MENTHOL 120

Menthol - Introduced 120 mm cigarette with 30 mm CA filter - White striped cigarette paper - Tar (19 mg) and nicotine (1.4 mg) deliveries.

8/75

Tar (18 to 20 mg), nicotine (1.6 to 1.7 mg), and CO (17 to 21 mg) increased - ventilation decreased (38 to 31%).

9/83

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TAREXTON 85

Paper component now being used, identified as chloride type. 4/63

TPM reduced by 3 mg - Nicotine delivery decreased by 0.1 mg. Total and filter RTD increased. 6/63

TPM and nicotine reduced (4 mg and 0.1 mg) - Change in paper component and porosity. 2/64

Fiber shape changed, I to cloverleaf. 8/64

Fiber denier changed, 5.0 to 4.0. 11/64

Fiber shape changed, cloverleaf to I. 5/65

Reconstituted tobacco content increased (10 to 14%). Tipping paper increased 19 to 24 mm, paper porosity increased - TPM unchanged. 10/65

TPM (1 mg) decreased as result of change in filter length - Paper porosity decreased 14 to 20 seconds. 2/67

Reconstituted tobacco decreased 20 to 15%. 4/67

Addition of 3% ES to blend. 10/69

Tar decreased (19 to 17 mg) resulting from a change to a more porous cigarette paper. 4/75

7/76

TAREXTON 85

Freeon expanded tobacco introduced to the blend at the 9% level resulting in a lower tobacco weight. Change resulted in lower tar (16 to 14 mg) and nicotine (1.2 to 1.0 mg) deliveries. 8/78

Lower tar (15 to 13 mg) correlating with a higher RTD for the inner paper filter. 5/79

TAREXTON LIGHTS 85

Test marketed - an 85 mm low tar (8 mg) and nicotine (0.6 mg) cigarette. 27 mm dual filter with filter ventilation (44%) consisting of 17 mm CA outer filter and 10 mm paper inner filter. Inner filter contains carbon granules. Longest filter of any 85 mm cigarette on the market. 1/77

Tar (7 to 4 mg) and nicotine (0.7 to 0.3 mg) decreased resulting from an increase in filter ventilation and lower tobacco weight. Lower tobacco weight result of the addition of expanded tobacco (32%). 2/80

Tar (5 to 6 mg), nicotine (0.4 to 0.3 mg) and CO (5 to 6 mg) increased as a result of decreased ventilation (53 to 41%). 11/86

TAREYTON MENTHOL 85

Introduced on test market - Low delivery (7 mg tar and 0.6 mg nicotine), mentholated brand similar in most characteristics to Tareyton Lights 85 previously introduced. Contains no charcoal in filter.

9/77

Discontinued.

TAREYTON 100

Introduced - 100 mm 20 mm dual filter.

4/67

TPM (2 mg) decreased as result of changing paper porosity.

5/67

Tar (2 mg) and nicotine (0.2 mg) reduced by increases in filter length (20 to 25 mm) and tipping paper (24 to 30 mm). Filter length (20 to 25 mm) increased, no changes in smoke deliveries.

10/67

9/68

Tar (2 mg) and nicotine (0.1 mg) increased correlating with a reduction in filter efficiency.

11/70

Tar (2 mg) increased - Higher filler rod TPM and puff count.

12/71

Filter length (25 to 27 mm) and tipping paper (30 to 32 mm) increased. Lower tar (1 mg) noted.

10/73

Addition of 3% ES to blend.

4/75

Tar (19 to 17 mg) and nicotine (1.4 to 1.3 mg) decreased resulting from a change to a more porous cigarette paper.

7/76

Lower tar (17 to 15 mg) and nicotine (1.3 to 1.2 mg) deliveries resulting from decrease in filler rod TPM delivery.

5/78

Free expanded tobacco introduced to the blend at the 9% level resulting in a lower tobacco weight. Change resulted in lower tar (15 to 13 mg) and nicotine (1.2 to 1.0 mg) deliveries.

8/78

TAREYTON LONG LIGHTS 100

Introduced - 100 mm low tar (8 mg) and nicotine (0.7 mg) cigarette. 27 mm dual filter with filter ventilation (37%) consisting of 17 mm CA outer filter and 10 mm paper inner filter. Inner filter contains carbon granules. Blend contains 7% expanded tobacco.

1/78

Tar (9 to 7 mg) and nicotine (0.8 to 0.7 mg) decreased resulting from an increase in filter ventilation (30 to 47%).

8/79

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AMERICAN TOBACCO COMPANY

A23

TAREXTON ULTRA LOW TAR MENTHOL 85

Test marketed - These new cigarettes deliver 2 mg tar and
0.1 mg nicotine - 25 mm CA filter with 75% ventilation and
blend containing 34% expanded tobacco.

3/79

Discontinued.

TENNYSON MENTHOL 85

Introduced - king size mentholated - carbon portion of
dual filter has no gas phase activity.

10/65

Discontinued.

TENNYSON MENTHOL 100

100 mm mentholated cigarette - menthol contained in
gelatin capsules which release menthol when filter is
pinched - similar filter to that in Waterford.

10/67

Discontinued.

TWIST 100

Test marketed - 100 mm cigarette with lemon and menthol
flavoring. Blend contains 10% expanded stems.

6/73

Discontinued.

12/75

ULTRA CARLTON

Name changed from Carlton 85 (Box) - new package graphics.

7/88

WATERFORD 88

Introduced - long size in crush proof box - novel filter
containing two types of capsules in addition to charcoal -
One of the capsule types contains water.

9/65

Discontinued.

12/66

WATERFORD 85

Introduced - king size in soft pack - novel filter contains
only one type capsule containing water - Charcoal also
present.

2/66

Discontinued.

WHITE LEAF 85

Test marketed - 85 mm filter cigarette with bleached all
tobacco wrapper instead of cigarette paper.

6/67

Discontinued.

2031438432

B. BROWN AND WILLIAMSON TOBACCO COMPANYARCTIC LIGHTS 85

Test marketed - 85 mm cigarette delivering 9 mg tar and 0.7 mg nicotine. High alkaloid blend containing 14% expanded stems - 25 mm CA filter with 33% ventilation.

9/78

Discontinued.

ARCTIC LIGHTS 100

Test marketed - 100 mm cigarette delivering 10 mg tar and 0.8 mg nicotine. High alkaloid blend containing 14% expanded stems - 27 mm CA filter with 39% ventilation.

9/78

Discontinued.

AVALON 85

Introduced - test market - king size, triple filter, in soft pack.

7/63

Discontinued.

12/64

BARCLAY 80 (BOX)

Test marketed - ultra low tar (3.2 mg) - 27 mm CA filter containing 64% ventilation-blend contains 11% reconstituted tobacco, 18% expanded tobacco and 11% expanded stems.

10/80

Tar (3.0 to 1.3 mg), nicotine (0.17 to 0.08 mg) and CO (3.0 to 1.2 mg) reduced as result of increase in filter ventilation (66 to 84%) - rows of (MP) holes increased (2 to 3) - elimination of reconstituted tobacco, expanded stems - increase in expanded tobacco (17 to 36%) - lower tobacco weight (0.582 to 0.520 g) - increase in total alkaloids (1.71 to 2.67%).

2/81

Reconstituted tobacco (19%) and expanded stems (5%) added to blend - expanded tobacco decreased (32 to 10%) - tobacco weight (0.533 to 0.628 g) and rod density (0.203 to 0.240 g/cc) increased.

1/85

BARCLAY ULTRA LIGHTS 80 (BOX)

Introduced in Wichita, Kansas - delivers 1 mg tar and 0.1 mg nicotine - utilizes the same filter as the Barclay 80 - similar to Barclay 80 in most characteristics.

11/84

Discontinued.

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BARCLAY 85

Test marketed - ultra low tar (2.5 mg) - 27 mm CA filter with 77% filter ventilation-blend contains 32% expanded tobacco and no reconstituted tobacco or expanded stems. 9/80

Reconstituted tobacco (19%) and expanded stems (5%) added to blend - expanded tobacco decreased (32 to 10%) - tobacco weight (0.550 to 0.678 g) and rod density (0.194 to 0.240 g/cc) increased. 1/85

Test marketed version of Barclay 85 with three rows of micro-mechanical perforation and one row of Mauni laser perforation and an Actron filter (manufactured by American Filtrona) that uses cellulose acetate as the plugwrap. 1/86

National distribution with filter design introduced in January, 1986. 5/86

BARCLAY MENTHOL 85

Introduced - nationally - 85 mm mentholated cigarette. Tar (1.4 mg) and nicotine (0.11 mg) - filter ventilation is achieved by a system of mechanical perforation and four longitudinal grooves along the filter. These cigarettes are similar in most characteristics to Barclay 85. 7/81

Uses cellulose acetate film as the plugwrap - filter manufactured by American Filtrona 9/85

Discontinued. 7/87

BARCLAY ULTRA LIGHTS 85

Introduced in Wichita, Kansas - delivers 1 mg tar and 0.1 mg nicotine - utilizes the same filter as the Barclay 85 - similar to Barclay 85 in most characteristics. 11/84

Discontinued.

BARCLAY 100

Test marketed - ultra low tar (3.5 mg) - 27 mm CA filter with 69% filter ventilation - blend contains 26% expanded tobacco, 6% reconstituted tobacco and 12% expanded stems. 9/80

Introduced nationally. 7/81

Decreased the amount of expanded tobacco (25 to 12%) and increased the amount of reconstituted material (7 to 17%) - increased tobacco weight and rod density. 7/85

Tar (3 to 5 mg) nicotine (0.3 to 0.4 mg) and CO (2 to 3 mg) increased - lower ventilation (76 to 69%). 11/85

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BARCLAY 100 (continued)

Test marketed version of Barclay 100 with two rows of micro-mechanical perforation and one row of Mauni laser perforation and an Actron filter (manufactured by American Filtrona) that uses cellulose acetate as the plugwrap.

1/86

National distribution with filter design introduced in January, 1986.

5/86

BARCLAY MENTHOL 100

Introduced - nationally - 100 mm mentholated cigarette. Tar (3.4 mg) and nicotine (0.28 mg) - filter ventilation is achieved by a system of mechanical perforation and four longitudinal grooves along the filter. These cigarettes are similar in most characteristics to Barclay 100.

7/81

Uses cellulose acetate film as the plugwrap - filter manufactured by American Filtrona.

9/85

Discontinued.

7/87

BARCLAY LIGHTS ULTRA THINS 100 (BOX)

Test market - Atlanta, Georgia - delivers 9 mg tar, 0.7 mg nicotine - 17 mm circumference.

11/87

BARCLAY LIGHTS ULTRA THINS MENTHOL 100 (BOX)

Test market - Atlanta Georgia - delivers 9 mg tar, 0.7 mg nicotine, and 0.7 mg smoke menthol - 17 mm circumference.

11/87

BARCLAY ULTRA LIGHTS 100

Introduced in Wichita, Kansas - delivers 4 mg tar and 0.4 mg nicotine - utilizes the same filter as the Barclay 100 - similar to Barclay 100 in most characteristics.

11/84

Discontinued.

RELAY 85

Introduced - king size recessed filter, mentholated.

6/60

Lighter filter.

6/62

Flush-type filter.

6/62

TPM reduced, and paper porosity increased - Carbowax (5%) observed in the filter.

12/63

Filler alkaloids increased resulting in higher nicotine delivery.

1/64

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RELATE 15 (continued)

Change in paper component, phosphate to citrate.	3/64
TPM reduced (2 mg).	8/64
Filler change reduced nicotine delivery by reducing total alkaloids.	9/64
Fiber shape changed from cloverleaf to X-shape.	3/66
TPM (1 mg) increased.	5/66
TPM (4 mg), nicotine (0.2 mg), and menthol in smoke (0.1 mg) decreased as result of change in paper porosity.	1/67
TPM (2 mg) decreased as result of blend change.	8/67
Tar (2 mg) reduced by increase in filter efficiency; fiber shape changed X to Y-shape.	3/68
Tar (1 mg), nicotine (0.2 mg), and menthol (0.5 mg) deliveries were reduced by changes in filter length (20 to 21 mm) and tipping paper (24 to 25 mm).	7/68
Reconstituted tobacco (7 to 11) and RKS (12 to 16) increased.	4/70
Addition of expanded RKS to blend replacing portion of regular RKS.	2/72
Lower total alkaloids (0.2%) and nicotine delivery (0.2 mg).	5/73
Tipping paper length increased 25 to 26 mm - No other changes.	7/73
Menthol in smoke content increased by increasing filler menthol.	3/76
Filler alkaloids and total reducing sugars were lower. Nicotine delivery reduced by 0.1 mg.	5/76
Lower tar delivery (15 to 13 mg) resulting from a change to a more porous, mechanically perforated cigarette paper.	8/77
Lower tar (13 to 12 mg) due to decrease in filler rod TPM delivery.	5/78
The addition of expanded tobacco at the 6% level was observed. This change resulted in lower tobacco weight and rod density and an increase in total RTD. 10/78 Lower tar (12 to 8 mg) and nicotine (0.9 to 0.8 mg) deliveries resulting from the introduction of filter ventilation (26%) and an increase in tipping paper length.	1/79

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RELAY 15 (cont.)

Tar (9 to 10 mg), nicotine (0.76 to 0.82 mg) and filler rod TPM (26.3 to 29.8 mg) increased resulting from less porous paper (7 to 15 sec.) with lower level of paper component (0.6 to 0.2%) - decreased total and filter RTD. 1/84

Increased filter and tipping lengths - lower tobacco weight resulted - no changes in smoke deliveries. 9/87

Test marketed in Illinois as a branded generic. This cigarette is packaged in a green and white pack and delivers 15 mg tar, 1.2 mg nicotine and 0.6 mg smoke menthol. 3/89

RELAY 100

100 mm cigarette with 25 mm CA filter - Similar to Kool 100. 9/68

Coupon added to pack. 9/69

RKS decreased (17 to 13%). 10/69

Filter fiber shape changed - X-shape to Y-shape. 8/71

Addition of expanded RKS to blend replacing portion of regular RKS. 2/72

Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Tar (2 mg) and nicotine (0.1 mg) decreased. 12/72

Lower total alkaloids (0.1%) and nicotine delivery (0.1 mg). 5/73

Menthol in smoke content increased by increasing filler men. 3/76

Lower tar delivery (16 to 14 mg) resulting from a change to a more porous, mechanically perforated cigarette paper. 8/77

Lower tar (14 to 13 mg) due to decrease in filler rod TPM delivery. Lower tobacco weight and rod density were also noted. 5/78

The addition of expanded tobacco at the 6% level was observed. This change resulted in lower tobacco weight and rod density and an increase in total RTD. 10/78

Lower tar (13 to 8 mg) and nicotine (1.0 to 0.7 mg) deliveries resulting from the introduction of filter ventilation (33%) and an increase in tipping paper length (32 to 36 mm). A change to a less porous paper (7 to 12 seconds) and the removal of expanded tobacco in the blend was noted. 1/79

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RELAIR 100 (cont.)

Addition of 10% expanded tobacco resulted in a lower tobacco weight and rod density. Tar (7 to 8 mg) and CO (10 to 11 mg) increased as a result of a decrease in filter ventilation (37 to 24%). 11/80

Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight. 3/81

Tar (10.2 to 8.8 mg), nicotine (0.81 to 0.74) and CO (12.0 to 10.2 mg) decreased - increased ventilation (25 to 34%). 9/82

Tar (9.2 to 7.5 mg), nicotine (0.67 to 0.58 mg), CO (8.0 to 6.6 mg) and menthol (0.38 to 0.32 mg) decreased - increased ventilation (36 to 45%). 5/84

Test marketed in Illinois as a branded generic. This cigarette is packaged in a green and white pack and delivers 15 mg tar, 1.2 mg nicotine and 0.6 mg smoke menthol. 3/89

RELAIR LIGHTS 85

Test marketed in Illinois as a branded generic. This cigarette delivers 10 mg tar, 0.9 mg nicotine and 0.5 mg smoke menthol. 3/89

RELAIR LIGHTS 100

Test marketed in Illinois as a branded generic. This cigarette delivers 10 mg tar, 0.9 mg nicotine and 0.5 mg smoke menthol. 3/89

REEFER 85

Introduced - test market - king size mentholated, in soft pack - similar to KOOL. 5/63

Discontinued.

CAPRI 100 (BOX)

Test marketed in Louisiana - delivers 9 mg tar and 0.7 mg nicotine - has a 17 mm circumference. 1/87

CAPRI 100 MENTHOL (BOX)

Test marketed in Louisiana - delivers 9 mg tar, 0.7 mg nicotine and 0.7 mg smoke menthol - has a 17 mm circumference. 1/87

CAPRI LONGS 100

100 mm mentholated cigarette with 22 mm CA filter - Lower smoke menthol than KOOL 100. 9/67

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CAPRI LONGS 100 (cont.)

Filter length (22 to 25 mm) and tipping paper length (27 to 30 mm) increased - Paper porosity changed (21 to 10 seconds) - No change in tar.

11/68

Discontinued.

12/79

CAPRI 110

Introduced a new 110 mm cigarette 24.7 mm in circumference. Tar (19 mg) and nicotine (1.5 mg); 30 mm CA filter; 35 mm tipping paper.

3/75

Discontinued.

12/75

CAPRI MENTHOL 110

Introduced a new 110 mm menthol cigarette 24.7 mm in circumference. Tar (19 mg) and nicotine (1.5 mg); 30 mm CA filter; 35 mm tipping paper. 5/75

Discontinued.

12/75

CAPRI 120 (BOX)

Test marketed in New Orleans, LA - delivers 13 mg tar and 0.9 mg nicotine - has a 17 mm circumference.

11/68

CAPRI MENTHOL 120 (BOX)

Test marketed in New Orleans, LA - delivers 12 mg tar, 0.8 mg nicotine and 1 mg smoke menthol - has a 17 mm circumference.

11/68

CHEVRON 85

Introduced - test market - king size filter, in soft pack - similar to Viceroy.

3/63

Discontinued.

CORONET 85 (NF)

Introduced - king size, nonfilter in new aluminum foil wrapper - similar to Raleigh plain end.

10/62

Discontinued.

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DOVER LONGS 100

Introduced - 100 mm cigarette with 22 mm CA filter. 2/67

Tar (4 mg) and nicotine (0.4 mg) reduced by changes in the filter and in the blend. 11/67

Discontinued. 12/68

ELI CUTTER 70 (MF)

Introduced in Sacramento, CA and Denver, CO - delivers 21 mg tar and 1.3 mg nicotine - packed in a black pack. 11/84

Discontinued

ELI CUTTER 80 (BOX)

Introduced in Sacramento, CA and Denver, CO - delivers 15 mg tar and 1 mg nicotine - packed in a black pack - micro-mechanical ventilation system. 11/84

Discontinued.

ELI CUTTER 85

Introduced in Sacramento, CA and Denver, CO - delivers 15 mg tar and 1 mg nicotine - packed in a black pack - micro-mechanical ventilation system. 11/84

Reintroduced in a red package in Oklahoma - delivers 16 mg tar, 1.1 mg nicotine. 9/86

ELI CUTTER LIGHTS 85

Test marketed in Oklahoma - packaged in a beige pack. This cigarette delivers 11 mg tar and 0.9 mg nicotine. This brand contains a new type of reconstituted tobacco that is a cast sheet material containing diammonium phosphate. 9/86

FACT 85

Test marketed - CA filter with a pocket in the middle containing yellowish granules identified as Duolite - Tar (14 mg) and nicotine (1.0 mg) deliveries. 7/75

Cigarette paper changed to mechanically perforated with citrate as paper component. Tipping paper increased from 30 to 32 mm. 4/76

Introduction of Hauni ventilation (20%) resulted in lower tar delivery (14 to 11 mg). 7/77

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FACT 85 (cont.)

Re-introduced with new packaging and lower tar (9 mg) and nicotine (0.7 mg) deliveries. Lower deliveries accomplished using more efficient filter and higher level of ventilation (30%). Continues to utilize "Duolite" granules in filter.

9/77

Discontinued.

12/77

FACT MENTHOL 85

Menthol - test marketed CA filter with a pocket in the middle containing yellowish granules identified as Duolite. Tar (13 mg) and nicotine (0.9 mg) deliveries. Cigarette paper - mechanically perforated with citrate as paper component.

4/76

Introduction of Nauni ventilation (30%) resulted in lower tar delivery (13 to 11 mg).

7/77

Re-introduced with new packaging and lower tar (9 mg) and nicotine (0.7 mg) deliveries. Lower deliveries accomplished using a more efficient filter and higher level of ventilation (30%). Continues to utilize "Duolite" granules in filter.

9/77

Discontinued.

12/77

FIESTA 80 (SOFT PACK)

Test marketed in southern California - manufactured in Mexico - delivers 14 mg tar and 0.6 mg nicotine.

3/85

FLAIR 100

Plain - 100 mm slim cigarette with 27 mm CA filter.

2/70

Discontinued.

FLAIR MENTHOL 100

Menthol - 100 mm slim cigarette with 27 mm CA filter.

2/70

Discontinued.

HALLMARK 85

Plain - New cigarette designed to give uniform smoke deliveries from first puff to last puff - The cigarette paper is coated with sodium chlorate at evenly spaced intervals.

9/70

Discontinued.

12/70

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HALLMARK MENTHOL 85

Menthol - New cigarette designed to give uniform smoke deliveries from first puff to last puff - The cigarette paper is coated with sodium chlorate at evenly spaced intervals.

9/70

Discontinued.

12/70

HALLMARK 100

Introduced - test market - packaged in a slide and shell box with an automatic top opening device and delivers 24 mg tar. Blend contains no reconstituted tobacco or expanded stems; filter contains modified ion exchange resin (Duolite).

7/76

Discontinued.

HALLMARK MENTHOL 100

Introduced - test market - a mentholated version of Hallmark 100 cigarettes. Delivers 23 mg tar.

8/76

Discontinued.

KENTUCKY KING 85

Introduced, king size. "All tobacco filter."

5/60

Phosphate treated paper.

3/61

Increased TPM and nicotine deliveries achieved by slower static burning and increased alkaloids.

2/62

Discontinued.

12/62

KIM SLIMS 100 (BOX) 25'S

Test marketed in Hawaii and Nashville, Tennessee - delivers 9 mg tar and 0.7 mg nicotine - has a 94 mm length.

7/86

KIM SLIMS 100 MENTHOL (BOX) 25'S

Test marketed in Hawaii and Nashville, Tennessee - delivers 9 mg tar, 0.7 mg nicotine and 0.5 mg smoke menthol - has a 94 mm length.

7/86

KOOL 80 (BOX)

Introduced in flip-top box - Similar to Kool 85.

5/74

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KOOL 15

New filter, lower RTD.	6/60
Filter fiber denier and weight decreased, no change in filtration efficiency.	6/61
Filter length increased (17 to 20 mm); higher filter efficiency.	3/62
Carbowax (5%) observed in the filter.	12/63
Filler alkaloids increased resulting in higher nicotine delivery.	2/64
TPM (2 mg) and nicotine deliveries decreased as result of change in paper additive, phosphate to citrate.3/64	
Nicotine delivery decreased by decreasing filler alkaloids.	12/64
Filler alkaloids increased.	4/65
Fiber shape changed from I to Y.3/66	
TPM (1 mg) increased.	6/66
TPM (2 mg), nicotine (0.2 mg), and menthol in smoke (0.1 mg) decreased by increasing paper porosity.	10/66
TPM (2 mg) decreased as result of a blend change.	8/67
Filter length (20 to 21 mm) and tipping paper (24 to 25 mm) increased, no change in smoke deliveries.	4/68
Tar (1 mg) and nicotine (0.1 mg) were reduced correlating with a lower filler rod TPM.	7/68
Menthol in smoke and filler increased.	1/69
Reconstituted tobacco (8 to 12%) and RKS (11 and 15%) increased.	4/70
Addition of expanded RKS to blend replacing portion of regular RKS.	2/72
Tar (0.6 mg) and nicotine (0.05 mg) lower due to faster static burning time.	10/72
Reconstituted tobacco increased 11 to 15%.	5/73
Tipping paper length increased 25 to 26 mm - No other changes.	7/73
Menthol in smoke content increased by increasing filler menthol.	3/76

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KOOL 85 (cont.)

Higher CO (14 to 16 mg) - change to a less porous cigarette paper (14 to 20 sec.) with a higher level of paper component (0.2 to 0.7%)

11/85

KOOL 85 25's

Test market - similar to Kool 85 - eight packs in a carton for a total of 200 cigarettes

11/85

Discontinued.

9/86

KOOL INTERNATIONAL MENTHOL 85

Test marketed - This brand is packaged in the princess pack. Tar (10 mg). Ventilation consists of 1 row of Laser perforated holes. This cigarette previously available only in foreign markets.

8/79

Discontinued.

KOOL MILDS 80 (BOX)

Distributed nationally - delivers 11 mg tar, 0.8 mg nicotine and 0.6 mg smoke menthol.

7/86

KOOL MILDS 85

Introduced - Tar (16.5 mg) and nicotine (1.4 mg) - Very similar to Kool 85 except for total alkaloids. Regular and expanded RKS in blend (11%).

4/72

Marketed nationally in July, 1972, with longer filter (21 to 25 mm) and increased tipping paper length (25 to 30 mm). Increase of regular and expanded RKS (11 to 18%). These changes resulted in lower tar (3 mg) and nicotine (0.3 mg).

7/72

Lower total alkaloids (0.3%) and nicotine delivery (0.2 mg).

5/73

Blend change - Lower alkaloids and filler rod TPM resulting in lower tar (2 mg) and nicotine (0.2 mg). Lower puff count and higher RTD noted.

8/74

The addition of expanded tobacco at the 6% level was observed. This change resulted in lower tobacco weight and rod density and an increase in total RTD.

10/78

A lower tar (13 to 11 mg) achieved by introduction of filter ventilation (15%) and a change to a more porous cigarette paper. A blend change indicated by a high filler alkaloid content and lower reducing sugars.

10/79

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KOOL MILDS 85

Expanded tobacco eliminated (11 to 0%) - increase in tobacco weight. 3/81

Free expanded tobacco has been added (11%) resulting in lower tobacco weight (0.692 to 0.670 g). 7/81

Higher CO delivery correlated with a less porous cigarette paper - longer tipping paper length. 1/86

KOOL MILDS 100

Test marketed - A brand extension of Koal Milds 85. Tar (13 mg) and nicotine (1.2 mg) with 19% ventilation. Blend contains 7% expanded tobacco. Ventilation achieved by a band of electrostatic perforation. 8/79

Expanded tobacco eliminated (11 to 0%) - increase in tobacco weight. 3/81

Free expanded tobacco has been added (11%) resulting in lower tobacco weight (0.884 to 0.829 g). 7/81

Change to a less porous cigarette paper and an increased ventilation noted - no changes in smoke deliveries. 1/86

KOOL NATURAL 85

Introduced - test market - delivers 14 mg tar. Similar to Fact 85 and Vanguard 85 cigarettes. Filter containing Duolite granules described as an "Actron" filter. 8/76

Discontinued.

KOOL 100

100 mm mentholated cigarette with 22 mm CA filter. 9/67

Changes in blend, filter length (22 to 25 mm), and tipping paper (27 to 30 mm) did not alter smoke deliveries. 8/68

Menthol in smoke and filter increased. 1/69

Addition of expanded RKS to blend replacing portion of regular RKS. 2/72

Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Lower tar (1 mg) and nicotine (0.1 mg). 2/73

Reconstituted tobacco content increased (11 to 15%). 5/73

Menthol in smoke content increased by increasing filler menthol. 3/76

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2031438445

KOOL 100 (cont.)

Lower tar (18 to 17 mg) resulting from decrease in filler rod TPM delivery. An increase in total RTD was also observed. 5/78

Level of reconstituted tobacco increased from 10 to 16% and level of expanded stems decreased from 17 to 14%. 9/78

Lower tar (16 to 15 mg) and nicotine (1.2 to 1.1 mg) deliveries resulting from a change to a more porous cigarette paper (22 to 12 sec.). 12/78

The addition of 8% expanded tobacco was noted - This change resulted in a lower tobacco weight and rod density. 9/80

Higher tar (14 to 16 mg) and nicotine (0.9 to 1.1 mg) deliveries - increased filler rod TPM, tobacco weight and total alkaloid content - higher smoke menthol (0.4 to 0.5 mg) due to increased menthol in the filler and filter. 11/85

KOOL LIGHTS 85

Name changed from Kool Super Lights 85. Ventilation system changed to two rows of mechanical perforation. These cigarettes are lower in tar (8.6 mg) because of a more efficient filter and higher ventilation level. 9/81

Test marketed in St. Louis, Missouri with new package graphics and white tipping. No changes were noted in smoke deliveries. 1/89

KOOL LIGHTS 100

Name changed from Kool Super Lights 100. Ventilation system changed to two rows of mechanical perforation. These cigarettes are lower in tar (12.3 mg) because of a more efficient filter and higher ventilation level. 9/81

Tar (11 to 10 mg), nicotine (0.9 to 0.8 mg) and CO (10 to 8 mg) decreased due to increased ventilation (28 to 38%). 5/83

Change to a less porous cigarette paper (14 to 21 seconds) was observed - no changes in smoke deliveries. 11/86

Tar, nicotine and CO decreased as a result of increased ventilation and more porous cigarette paper. 7/87

Test marketed in St. Louis, Missouri with new package graphics and white tipping. No changes were noted in smoke deliveries. 1/89

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KOOL SUPER LIGHTS 85

Introduced - 85 mm mentholated cigarette - low tar (9 mg) and nicotine (0.7 mg) resulted primarily from filter ventilation (25%) and low available TPM filler. Mechanically perforated cigarette paper. Typical Brown & Williamson blend. Tar (9 mg) and nicotine (0.8 mg) listed on pack.

7/77

Tar (9 to 6 mg) and nicotine (0.8 to 0.6 mg) deliveries were decreased by increasing the filter ventilation and lowering the tobacco weight. Lower tobacco weight result of addition of 6% expanded tobacco. Paper porosity changed from 7 to 13 seconds. Data listed on pack as tar (7 mg) and nicotine (0.7 mg).

7/79

Discontinued.

KOOL SUPER LIGHTS 100

Introduced - 100 mm mentholated cigarette - low tar (9 mg) and nicotine (0.8 mg) achieved by filter ventilation (35%) and low available TPM filler. Typical Brown & Williamson blend. Tar (9 mg) and nicotine (0.8 mg) listed on pack.

7/77

Addition of 10% expanded tobacco resulted in a lower tobacco weight and rod density.

11/80

Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight - tar and nicotine data printed on packs has been removed.

3/81

Tar (8.1 to 9.4 mg), nicotine (0.65 to 0.72 mg) and CO (9.9 to 12.2 mg) increase - reduced filter ventilation (32 to 24%).

4/81

Discontinued.

KOOL ULTRA 85

Introduced - test market - tar and nicotine deliveries advertised as 2 mg and 0.3 mg, respectively. The filter system is similar to that of the Barclay with mechanical perforation and four longitudinal grooves along the filter.

9/81

Filter changed from "Actron" filter (Barclay-type) to conventional cellulose acetate filter - higher total and filter RTD, lower ventilation and less porous cigarette paper were also noted. Higher smoke deliveries resulted from these changes. Higher smoke menthol correlated with increased filler and filter menthol.

11/86

Filter changed back to "Actron" (Barclay-type) filter.

7/87

Test marketed as Kool Ultra Lights in St. Louis, Missouri with new package graphics and white tipping. No changes were noted in the filter design or smoke deliveries.

1/89

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KOOL ULTRA 100

Introduced - test market - tar and nicotine deliveries are 5.7 mg and 0.55 mg, respectively. The filter system is similar to that of the Barclay with mechanical perforation and four longitudinal grooves along the filter.

9/81

Filter changed from "Actron" filter (Barclay-type) to conventional cellulose acetate filter - higher total and filter RTD, lower ventilation and less porous cigarette paper were also noted. Higher smoke deliveries resulted from these changes. A longer filter length was observed.

11/86

Filter changed back to "Actron" (Barclay-type) filter.

7/87

Test marketed as Kool Ultra Lights in St. Louis, Missouri with new package graphics and white tipping. No changes were noted in the filter design or smoke deliveries.

1/89

LIFE 85

TPM (7 mg) and nicotine (0.5 mg) increased by decrease in filter efficiency - Filter changed from 25 mm paper to 25 mm CA.

2/66

TPM (5 mg) and nicotine (0.3 mg) decreased as a result of increase in filter efficiency. Filter changed from 25 mm CA to dual filter 12.5 mm CA and 12.5 mm paper.

12/66

TPM (2 mg) decreased as result of increased filter efficiency - Filter changed to an 18 mm/7 mm (paper/CA).

2/67

TPM (4 mg) and nicotine (0.2 mg) increased as result of a change in filter construction 12.5/12.5 mm (paper/CA) which resulted in decrease in filter efficiency.

3/67

Discontinued.

LIFE FILTER 100

Lowest tar delivery of any 100 mm - Dual filter, paper inner plug, and cellulose acetate outer plug - Tar (10 mg) and nicotine (0.8 mg) data are listed on pack.

6/70

Filter changed from 25 mm dual (paper/CA) to 27 mm CA. Total and filter RTD increased.

8/73

Discontinued.

LIFE 85

New flavor - lime-menthol product - Tar (14 mg) and nicotine (0.9 mg) low for B & W product.

10/71

Discontinued.

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PHOENIX 120

Plain - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper containing azo dyes - Circumference 21 mm - Tar (19 mg) and nicotine (1.4 mg) deliveries.

7/75

Discontinued.

PHOENIX MENTHOL 120

Menthol - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper containing azo dyes - Circumference 21 mm - Tar (19 mg) and nicotine (1.4 mg) deliveries.

7/75

Discontinued.

PRINCE 85

Imported by Brown & Williamson from Denmark - manufactured by Scandinavian Tobacco International - delivers 16 mg tar and 1.3 mg nicotine. A high level of expanded stem (24%) was in the blend.

11/88

PRINCE LIGHTS 85

Imported by Brown & Williamson from Denmark - manufactured by Scandinavian Tobacco International - delivers 12 mg tar and 1.0 mg nicotine. A high level of expanded stem (24%) was in the blend.

11/88

RALEIGH 70 (FILTER)

Test marketed in southern California - manufactured in Mexico - delivers 16 mg tar and 0.8 mg nicotine.

3/85

RALEIGH FILTER 85

Lighter filter with same efficiency.

4/61

Carbowax (5%) observed in the filter.

12/63

Filler alkaloids increased resulting in higher nicotine delivery.

1/64

TPM (4 mg) and nicotine (0.2 mg) decreased as result of change in paper component, phosphate to citrate.

6/64

Fiber shape changed from I to Y.

3/66

TPM (2 mg) increased.

6/66

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RALEIGH FILTER 85

TPM (2 mg) decreased, paper porosity increased and cigarette length decreased. 2/67

Reconstituted tobacco increased, 6 to 9%. 3/67

Tar (1 mg) reduced by changes to a more porous paper and in tipping paper (24 to 25 mm). 4/68

Filter length increased (20 to 21 mm). 7/68

Reconstituted material increased, 5 to 9%. 9/68

Paper porosity changed (11 to 17 seconds) - No change in tar. 1/69

Tar (2 mg) and nicotine (0.2 mg) decreased, lower alkaloids and tobacco weight observed. 8/69

RKS increased (7 to 18%). 10/69

Addition of expanded RKS to blend replacing portion of regular RKS. 3/72

Tipping paper length increased 25 to 26 mm - No other changes. 7/73

Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight - tar and nicotine data printed on pack has been removed. 3/81

Tobacco weight decreased (0.778 to 0.732 g) due to addition of 4% Freon expanded tobacco to the blend. 11/83

Tar (13.6 to 13.1 mg) and CO (16.5 to 13.8 mg) decreased - change to a more porous cigarette paper (23 to 12 sec.). 1/85

Increased expanded tobacco (4 to 10%) - decreased tobacco weight. 7/85

RALEIGH LIGHTS 85

Introduced - 85 mm version of Raleigh 85 with lower tar (13 mg) and nicotine (0.9 mg). It has 25 mm CA filter and 30 mm tipping paper. 4/73

Brand name changed from Raleigh Extra Milds 85 to Raleigh Lights 85. No other changes were noted. 10/76

Decrease in tar delivery (12 to 10 mg) resulting from introduction of filter ventilation (24%) and a change to a more efficient filter. Changed to a high alkaloid blend and replaced mechanically perforated cigarette paper with inherently porous paper. 4/78

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RALEIGH LIGHTS 85 (cont.)

Tar (9 to 8 mg) and nicotine (0.9 to 0.8 mg) deliveries lower correlating with a lower filler rod 'PM'. 3/79

12% Freon expanded tobacco added to blend. 5/83

Increased amount of reconstituted material and decreased amount of expanded stems - changed to a less porous cigarette paper. 9/85

Tipping paper length increased - lower tar and nicotine deliveries and a lower puff count resulted. 3/86

Expanded tobacco removed from the blend resulting in an increased tobacco weight and rod density. 1/88

Introduced - 100 mm version of Raleigh Lights 85 with 10 mg tar and 0.9 mg nicotine. 27 mm CA filter with 24% ventilation. 8/78

Tar (7.8 to 9.8 mg), nicotine (0.68 to 0.81 mg) and CO (10.7 to 14.4 mg) increased - decrease in filter ventilation (34 to 19%) - higher RTD (4.9 to 5.6). 2/81

Tar (10 to 9 mg), nicotine (0.9 to 0.8 mg) and CO (13 to 11 mg) decreased due to increased ventilation (26 to 32%). 5/83

12% Freon expanded tobacco added to blend resulting in lower tobacco weight (0.892 to .826 g/cc) and rod density (0.251 to 0.230 g/cc). Fiber denier changed (2.6/Y to 3.2/Y) resulting in lower filter RTD (4.1 to 3.3 in. H₂O) - decrease in filtration efficiency (59 to 52%). Tar increased (9 to 10 mg). 1/84

Increased amount of reconstituted material and decreased amount of expanded stems - more efficient filter used. 9/85

Tar (9 to 11 mg) nicotine (0.7 to 0.8 mg) and CO (11 to 13 mg) increased - decreased ventilation (27 to 20%). 11/85

RALEIGH LIGHTS 85

Expanded tobacco removed from the blend. Higher tar, nicotine and CO deliveries resulted; longer filter length was observed (27 to 30 mm). 1/88

RALEIGH 100

100 mm cigarette with 25 mm CA filter. 8/69

Coupon on pack. 9/69

Tar (1 mg) increased correlating with a change in paper porosity (13 to 25 seconds). 3/71

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RALEIGH 100 (cont.)

Addition of expanded RKS to blend replacing a portion of regular RKS. 3/72

Tar (1.8 mg) and nicotine (0.1 mg) lower - Lower tobacco weight and rod density noted. 5/72

Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Tar (1 mg) and nicotine (0.1 mg) decreased. 12/72

Lower tar (17 to 16 mg) resulting from decrease in filler rod TPM delivery. 5/78

Addition of expanded tobacco at the 6% level correlating with a lower tobacco weight and rod density. Lower tar (17 to 16 mg) and filler rod TPM deliveries noted. 4/79

Lower tar (16 to 15 mg) and nicotine (1.2 to 1.1 mg) resulting from a change to a more porous cigarette paper. 1/80

Tar (7.8 to 9.8 mg), nicotine (0.68 to 0.81 mg) and CO (10.7 to 14.4 mg) increased - decrease in filter ventilation (34 to 19%) - higher RTD (4.9 to 5.6). 2/81

Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight - tar and nicotine data printed on pack has been removed. 3/81

4% Free expanded tobacco added to blend resulted in lower tobacco weight (0.886 to 0.831 g) and rod density (0.250 to 0.233 g/cc). 1/84

RICHLAND 85

Introduced - contains 25 cigarettes per pack - delivers 15 mg tar and 1.2 mg nicotine - similar to Viceroy 85. 9/83

National distribution. 6/85

RICHLAND LIGHTS 85

Introduced - contains 25 cigarettes per pack - delivers 11 mg tar and 0.8 mg nicotine. 5/85

National distribution. 6/85

Expanded stems removed from the blend (11% to none) - increased tobacco weight and rod density - higher filler rod TPM correlated with this change. 5/87

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RICHLAND MENTHOL 85

Introduced - contains 25 cigarettes per pack - delivers 18 mg tar, 1.1 mg nicotine, and 0.5 mg menthol - similar to Kool 85.

9/83

National distribution.

6/85

Higher CO delivery resulted from less porous cigarette paper with an increased level of paper component.

3/86

RICHLAND 100 25's

Introduced nationally - 250 cigarettes per carton - delivers 16 mg tar and 1.1 mg nicotine.

5/86

RICHLAND LIGHTS 100 25's

Introduced nationally - 250 cigarettes per carton - delivers 11 mg tar and 0.8 mg nicotine.

5/86

ST. JAMES COURT 85

Introduced in Portland, Oregon; New Orleans, Louisiana; and Phoenix, Arizona - utilizes a dual cellulose acetate filter which consists of a 7 mm formed Filtrona section and a 20 mm "Actron" section - the Actron section contains a 20 mm cellulose acetate tube - the blend is not typical of Brown & Williamson products.

11/84

Test market expanded to Hawaii.

6/85

ST. JAMES COURT MENTHOL 85

Introduced in Portland, Oregon; New Orleans, Louisiana, and Phoenix, Arizona - utilizes a dual cellulose acetate filter which consists of a 7 mm formed Filtrona section and a 20 mm "Actron" section - the "Actron" section contains a 20 mm cellulose acetate tube - the blend is similar to Kool Lights.

11/84

Test market expanded to Hawaii.

6/85

ST. JAMES COURT 100 (BOX)

Introduced in Portland, Oregon; New Orleans, Louisiana, and Phoenix, Arizona - utilizes a dual cellulose acetate filter with a 7 mm formed Filtrona section and a 20 mm "Actron" section - the "Actron" section contains a 20 mm cellulose acetate tube - the blend is not typical of Brown & Williamson products.

11/84

Test market expanded to Hawaii.

6/85

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2031438453

ST. JAMES COURT MENTHOL 100 (BOX)

Introduced in Portland, Oregon; New Orleans, Louisiana; and Phoenix, Arizona - utilizes a dual cellulose acetate filter with a 7 mm formed Filtrona section and a 20 mm Actron section - the "Actron" section contains a 20 mm cellulose acetate tube - the blend is similar to Kool Lights.

11/84

Test market expanded to Hawaii.

6/85

SEVENTY 70

Plain - test marketed with mechanically perforated cigarette paper and 17 mm CA filter - 10 mg tar and 0.7 mg nicotine.

6/76

Discontinued.

SEVENTY MENTHOL 70

Menthol - test marketed with mechanically perforated cigarette paper and 17 mm CA filter - 10 mg tar and 0.7 mg nicotine.

6/76

Discontinued.

SPIRIT 85

Test marketed - 85 mm cigarette delivering 8 mg tar and 0.9 mg nicotine - This new brand has a high efficiency, 25 mm CA filter with 30% ventilation.

10/78

Discontinued.

SPIRIT 100

Test marketed - 100 mm cigarette delivering 9 mg tar and 1.0 mg nicotine - This new brand has a high efficiency, 27 mm CA filter with 27% ventilation.

10/78

Discontinued.

SUEDES 120

Plain - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper colored with azo dyes - Tar (17 mg) and nicotine (1.2 mg) deliveries - Circumference 21 mm.

9/75

Discontinued.

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SUEDES MENTHOL 120

Menthol - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper colored with azo dyes - Tar (19 mg) and nicotine (1.3 mg) deliveries - Circumference 21 mm.

9/75

Discontinued.

TRAMPS 85

Plain - Introduced - Light brown cigarette paper colored with caramelized sugar. Tar (19 mg) and nicotine (1.1 mg) deliveries.

9/74

Introduced with regular cigarette paper. Lower tar and nicotine deliveries than previous sample.

10/74

Tar (19 to 16 mg) and nicotine (1.3 to 1.1 mg) decreased. Filler rod TPM decreased (36 to 31 mg). Smoke deliveries change as result of paper change.

4/75

Discontinued.

12/75

TRAMPS MENTHOL 85

Menthol - Introduced - Light brown cigarette paper colored with caramelized sugar. Tar (19 mg) and nicotine (1.1 mg) deliveries.

9/74

Introduced with regular cigarette paper. Lower tar and nicotine deliveries than previous sample.

10/74

Tar (19 to 17 mg) and nicotine (1.1 to 1.0 mg) decreased. Smoke deliveries change as result of paper change.

4/75

Discontinued.

12/75

TRAMPS 110

Introduced plain 110 mm cigarette with light brown cigarette paper colored with caramelized sugar. Circumference 24.6 mm, 30 mm CA filter, and 35 mm tipping paper.

4/75

Discontinued.

12/75

TRAMPS MENTHOL 110

Introduced menthol 110 mm cigarette with light brown cigarette paper colored with caramelized sugar. Circumference 24.6 mm, 30 mm CA filter, and 35 mm tipping paper.

4/75

Discontinued.

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VANGUARD 85

Introduced - Similar to Fast 85 cigarettes previously introduced - CA filter with pocket in the middle containing yellowish granules identified as Duolite - Tar (14 mg) and nicotine (1.0 mg) deliveries.

8/75

Discontinued.

VANGUARD MENTHOL 85

Introduced - test market - mentholated version of Vanguard 85 - Delivers 14 mg tar.

7/76

Discontinued.

VICEROY 85

"Deep Weave," more efficient filter.

8/60

Lighter, slightly less efficient filter resulted in slight increase in TPM and nicotine delivery.

6/61

Total RTD reduced 20 mm K20 by changes in plug RTD, rod circumference, tobacco weight, and paper porosity.

8/62

Filter contains carbowax (5%).

5/63

Filter length has increased from 17 to 20 mm.

8/63

Filler alkaloids increased resulting in a higher nicotine delivery.

1/64

TPM (3 mg) and nicotine deliveries decreased, a result of a more porous cigarette paper.

2/64

TPM (2 mg) increased.

6/66

TPM (2 mg) decreased as result of blend change.

8/67

TPM (1 mg) reduced by changes to a more porous paper and in tipping paper (24 to 25 mm).

4/68

Reconstituted material increased, 6 to 9%.

9/68

Tar increased (1 mg) - Change in paper porosity (11 to 18 seconds) noted.

5/69

Tar (1 mg) and nicotine (0.1 mg) decreased, amount of paper component in cigarette paper increased.

7/69

RKS increased (11 to 140).

10/69

RKS increased (13 to 180).

10/70

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VICEROY 85 (cont.)

Addition of expanded RKS to blend replacing portion of regular RKS. 3/72

Tipping paper length increased 25 to 26 mm - No other changes. 7/73

Package design change - Tar (15 to 17 mg) and nicotine (1.0 to 1.1 mg) deliveries increased. Blend change observed. 6/75

Tar (15.0 mg) and nicotine (1.0 mg) deliveries returned to level prior to package design change. 10/75

Lower tar (16 to 14 mg) and nicotine (1.1 to 1.0 mg) deliveries achieved by change to a more efficient filter. Changes in total and filter RTD and filter fiber denier also noted. 3/78

Addition of expanded tobacco at the 6% level was observed. First time a Brown & Williamson product containing expanded tobacco was obtained from the market. Decrease in tobacco weight along with lower tar (14 to 13 mg) and nicotine (1.0 to 1.0 mg) deliveries resulting from the addition of expanded tobacco. 9/78

Tar increased (13.8 to 14.7 mg) due to decreased filtration efficiency (48 to 40%) and change in fiber denier (3.0 to 3.7). 3/83

Tar (15.5 to 14.2 mg) and CO (16.0 to 14.2 mg) decreased - change to a more porous cigarette paper (23 to 12 sec.). 1/85

Blend change resulted in lower level of expanded stems (13 to 5%) - dark colored reconstituted tobacco was replaced with a light colored reconstituted tobacco. The blend change increased tobacco weight. Higher smoke deliveries and a less porous cigarette paper were noted. Ventilation was added (None to 10%). This cigarette is now being sold at a generic price. 1/89

VICEROY EXTRA MILD 85

Introduced - Very similar to Viceroy Lights 85 previously test marketed by Brown & Williamson. 4/74

Tar (14 to 11 mg) and nicotine (1.0 to 0.8 mg) decreased by the introduction of Mauni ventilation at the 23% level. A decrease in total RTD was also noted. 1/77

Blend change resulting in higher filler rod TPM delivery. Changed to a more efficient filter and discontinued use of mechanically perforated cigarette paper. No change in tar or nicotine deliveries observed. Changed from Mauni ventilation to mechanically perforated tipping paper. Discontinued. 4/78
12/78

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VICEROY RICH LIGHTS 85

Introduced - Tar (9 mg) and nicotine (0.8 mg) with a 25 mm CA filter and 36% ventilation. Similar to Viceroy Extra Milds 85 cigarettes.

8/78

12% Freeon expanded tobacco added to blend.

5/83

Name changed to Viceroy Lights.

7/85

VICEROY LIGHTS 85

Introduced - Tar (12.5 mg) and nicotine (1.0 mg), 25 mm CA filter - 30 mm tipping paper - Blend contains expanded RKS.

4/72

Increased level of reconstituted material and decreased level of expanded stems - changed to a less porous cigarette paper.

9/85

Tipping paper length increased.

5/86

Increased level of reconstituted material and decreased level of expanded stems - changed to a less porous cigarette paper.

9/85

Expanded stems removed from the blend (11% to none) - increased tobacco weight and rod density - higher filler rod TPM correlated with this change.

5/87

VICEROY 100

100 mm cigarette with 22 mm CA filter.

10/67

Tar (2 mg) and nicotine (0.1 mg) reduced by changes in filter length (22 to 25 mm), tipping paper (27 to 30 mm) and to a more porous paper (20 to 12 seconds).

8/68

Tar (1 mg) increased. Change in paper porosity (11 to 20 seconds) noted.

5/69

Tar (2 mg) and nicotine (0.2 mg) decreased, change in paper porosity (21 to 14 seconds).

6/69

RKS increased (11 to 14%).

10/69

Tar (2 mg) and nicotine (0.1 mg) were reduced correlating to lower filler rod TPM - A decrease in alkaloids and higher reducing sugars were observed - An increase in RKS was noted.

9/70

RKS increased (13 to 18%).

10/70

Tar (1 mg) increased correlating with change in paper porosity (12 to 22 seconds).

3/71

Addition of expanded RKS to blend replacing portion of

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regular RKS.	3/72
Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Tar (2 mg) and nicotine (0.2 mg) decreased.	12/72
Package design change. Tar (16 to 17 mg) and nicotine (1.1 to 1.2 mg) deliveries increased. Blend change observed.	6/75
Decrease in tar (18 to 16 mg) and nicotine (1.3 to 1.1 mg) deliveries resulting from a change to a more porous cigarette paper.	11/77
Addition of expanded tobacco at the 7% level correlated with lower tobacco weight and rod density.	5/80
Tar (14 to 16 mg), nicotine (1.0 to 1.1 mg), filler rod TPM (27 to 29 mg) and total alkaloids (1.60 to 1.72%) increased. 9% ventilation added to brand - CO decreased (16 to 14 mg).	3/84
Blend change resulted in lower level of expanded stems (13 to 5%) - dark colored reconstituted tobacco was replaced with a light colored reconstituted tobacco. The blend change increased the tobacco weight. Higher smoke deliveries and a less porous paper were noted. Ventilation increased (8 to 17%). This cigarette is now being sold at a generic price.	1/89

VICEROY RICH LIGHTS 100

Introduced - 100 mm cigarette delivering 8 mg tar and 0.8 mg nicotine. 27 mm CA filter with 40% ventilation. This is a brand extension of Viceroy Rich Lights 85 cigarettes.	9/78
Tar value (8 to 9 mg) changed on pack to comply with FTC Report.	5/82
12% Freeon expanded tobacco added to blend.	5/83
Tar (11.8 to 10.2 mg) and CO (11.2 to 9.6 mg) decreased - ventilation increased (20 to 29%).	9/84
Tar (10.2 to 11.6 mg) and CO (9.6 to 11.4 mg) increased - decreased ventilation (29 to 21%).	3/85
Name changed to Viceroy Lights.	7/85

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VICTORY LIGHTS 100

Increased level of reconstituted material and decreased level of expanded stems - more efficient filter. 9/85

Filter length increased - lower tobacco weight resulted - change in fiber denier - no changes in smoke deliveries. 3/86

Expanded tobacco removed from the blend resulting in an increased tobacco weight and rod density. 1/88

KING FILTER 85

85 mm cigarette - 20 mm CA filter - contains 25% reconstituted material. 3/87

Discontinued. 12/88

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C. LIGGETT GROUPADAM 85

Introduced with 20 mm CA filter - Brown colored cigarette paper - paper colored with caramelized sugar. 7/71

Paper component in cigarette paper changed from citrate to phosphate - Tar (3 mg) and nicotine (0.3 mg) deliveries increased by this change. Package also redesigned. 10/72

Discontinued

ADAM 100

100 mm version of the 85 mm cigarette previously introduced - 25 mm CA filter. 10/72

Discontinued

CHESTERFIELD 70 (NF)

Paper porosity increased reducing TPM by 4 mg and nicotine delivery by 0.1 mg. 10/62

Alkaloids reduced by 0.10. 12/62

Tar (22.7 to 19.4 mg), nicotine (1.36 to 1.14 mg) and CO (12.9 to 11.0 mg) reduced - change to more porous cigarette paper (22 to 14 sec.). 2/81

Tar (19 to 18 mg) decreased due to use of perforated porous cigarette paper (7 sec.) with higher level of paper component (0.3 to 1.70). 1/84

CHESTERFIELD 85 (NF)

Paper porosity increased, reducing TPM by 8 mg and nicotine delivery 0.3 mg. 10/62

RTD increased (3.6 to 3.9 inches of H₂O). 8/65

TPM (2 mg) and nicotine (0.1 mg) deliveries increased. 12/65

Circumference reduced, resulting in lower tobacco weight. 5/67

Tar (.3 mg) reduced by changes in type paper component, phosphate to citrate. 2/68

Coupon added to pack. 4/69

Tar (2 mg) and nicotine (0.1 mg) decreased - Reconstituted tobacco increased (6 to 11%) and RNS added to blend (4%). 9/71

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CHESTERFIELD 85 (NF) (cont.)

Addition of expanded RKS to blend replacing a portion of regular RKS.	3/72
Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.	6/73
Expanded stem level increased from 4 to 10%.	9/76
Tar (24.8 to 23.7 mg), nicotine (1.59 to 1.45 mg) and CO (16.0 to 13.5 mg) reduced - change to a more porous cigarette paper (22 to 13 sec.).	1/81
Tar (23.0 to 20.2 mg) and CO (15.4 to 12.4 mg) decreased due to use of perforated cigarette paper that is more porous (14 to 7 sec.) with higher level of paper component (0.4 to 1.4%).	11/83
Tar (20 to 22 mg) and CO (12 to 16 mg) increased due to a change to a less porous paper (7 to 15 sec.) with decreased level of paper component (1.4 to 0.4%).	5/84

CHESTERFIELD LIGHTS 85

Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 10 mg tar and 0.8 mg nicotine.	11/88
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CHESTERFIELD LIGHTS 100

Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 10 mg tar and 0.8 mg nicotine.	11/88
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CHESTERFIELD 101

Test marketed - 101 mm long cigarettes with 20 mm CA filter.	8/67
Tar (2 mg) reduced by increase in tipping paper (24 to 27 mm).	2/68
Tar (3 mg) reduced by changes in blend and to a more porous paper (20 to 11 seconds).	7/68
Coupon added to pack.	4/69
Reconstituted tobacco removed from blend (20 to 0%) - RKS increased (5 to 11%).	10/69
Reconstituted tobacco added to blend (0 to 19%) - RKS lowered (11 to 6%) - Tar (3 mg) and nicotine (0.2 mg) decreased.	6/70
Addition of expanded RKS to blend replacing a portion of regular RKS.	3/72

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CHESTERFIELD 101 (cont.)

Filter length (20 to 25 mm) and tipping paper (27 to 30 mm) increased. Fiber denier change - No change in smoke deliveries.	7/72
Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.	6/73
Package changed to be similar to package of Chesterfield nonfilter.	10/74
Fiber shape changed (Y to I).	3/75
Tar (1 mg) lowered by increasing filter and tipping paper lengths. Fiber denier changed from 4.5 to 3.5.	1/76
Brand name changed from Chesterfield 101 to Chesterfield Filter Longs; cigarette length decreased (100.5 to 98.6 mm). Lower tar (1 mg) and nicotine (0.2 mg) deliveries were noted. Expanded stem level increased from 4 to 10%.	9/76
Brand name changed back to Chesterfield 101. Cigarette length and smoke deliveries returned to previous level.	11/76
An increase in the filter length (27 to 30 mm) and tipping paper length (32 to 35 mm) resulted in lower tar (15.3 to 14.1 mg), nicotine (1.10 to 1.04 mg), and CO (16.6 to 15.5 mg) deliveries.	8/81
Discontinued	

CHESTERFIELD FILTER 85

Introduced - King size soft pack - slow burning rate resulting in high TPM and nicotine deliveries.	4/66
Coupon added to pack.	4/69
Package changed - Similar to Chesterfield nonfilter.	1/75
Lower tar (18 to 14 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from a change to a more porous cigarette paper and a decrease in tobacco weight.	7/78
Tar (14 to 12 mg), nicotine (1.0 to 0.9 mg), and CO (14 to 12 mg) decreased due to increased filter length (21 to 25 mm) and tipping paper length (26 to 30 mm).	9/83
Discontinued	

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CHESTERFIELD MENTHOL FILTER 85

Introduced - king size in soft pack - slow burning rate resulting in high TPM and menthol deliveries. 4/66

TPM (3 mg), nicotine (0.1 mg), and menthol in smoke (0.1 mg) decreased as result of changes in cigarette paper and filter efficiency. 3/67

Coupon added to pack. 4/69

Addition of reconstituted tobacco (0 to 19%), RKS decreased (15 to 3%) - Tar (3 mg) and nicotine (0.1 mg) decreased. 6/70

Discontinued 12/74

DECADE 85

Introduced - Test market - Lower tar (5 mg) and nicotine (0.5 mg) deliveries achieved by filter ventilation. Filter contains a 14 mm polyethylene tube insert similar to the one used on L & M Flavor Lights 85. 10/76

Filter changed by removing polyethylene tube insert resulted in lower filter ventilation and higher filter RTD. No change in smoke deliveries. 10/80

Discontinued

DECADE MENTHOL 85

Introduced - low tar (5 mg) and nicotine (0.5 mg) achieved by high filter ventilation (59%). Has same filter and blend as Decade 85 cigarettes. Tar (5 mg) and nicotine (0.5 mg) listed on pack. 3/77

Filter changed by removing polyethylene tube insert resulted in lower filter ventilation and higher filter RTD. No change in smoke deliveries. 10/80

Discontinued.

DECADE 100

Introduced - 100 mm cigarette - 5 mg tar and 0.4 mg nicotine with a 27 mm CA filter and 65% ventilation. High level of citrate on the cigarette paper. Filter contains a polyethylene tube insert which is similar in construction to filters used on Decade 85 and L & M Lights 85 and 100 cigarettes. 8/78

Discontinued.

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DEVON 85

Introduced - King size mentholated cigarette with
"Lark-type" filter - Filter has gas phase activity.

5/64

Discontinued.

12/65

DORADO 85

Test market - New Mexico - delivers 14 mg tar and
1 mg nicotine.

7/83

DUKE 85

Dropped from C.I. History of Brand in C.I. 12/65.

1/66

EAGLE 85

Plain - test marketed - similar to L & M 85 cigarettes.
Sell for \$.05 less per pack than any other 85 mm product.

1/76

Discontinued.

EAGLE MENTHOL 85

Menthol - test marketed - similar to L & M 85 cigarettes.
Sell for \$.05 less per pack than any other 85 mm product.

1/76

Discontinued.

EVE LIGHT 100

Introduced 100 mm cigarette delivering 9 mg tar and 0.7 mg
nicotine. 27 mm CA filter with 450 ventilation and a high
level of citrate on the cigarette paper. Filter contains
a polyethylene tube insert which is similar in construction
to filters used on Decade 85 and L & M Lights 85 and 100
cigarettes.

8/78

Replaced by Eve Slim Lights 100 (Box).

6/83

EVE SLIM LIGHTS 100 (BOX)

Replaces Eve Light 100 - delivers 12 mg tar and 1 mg
nicotine - 22.7 circumference.

6/83

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EVE LIGHT MENTHOL 100

Introduced 100 mm menthol cigarette delivering 9 mg tar and 0.7 mg nicotine. 27 mm CA filter with 45% ventilation and a high level of citrate on the cigarette paper. Filter contains a polyethylene tube insert which is similar in construction to filters used on Decade 85 and L & M Lights 85 and 100 cigarettes.

8/78

Replaced by Eve Slim Lights Menthol 100 (Box).

6/83

EVE SLIM LIGHTS MENTHOL 100 (BOX)

Replaces Eve Light Menthol 100 - delivers 12 mg tar and 1 mg nicotine - 22.7 circumference.

6/83

EVE 100

Plain - 100 mm cigarettes in new pack with floral design - Tipping paper also has floral design.

6/70

Addition of expanded RKS to blend replacing a portion of regular RKS.

3/72

Change in filter length (20 to 25 mm) and fiber denier (3.4 to 4.5) - Change in alkaloids, reducing sugars, and filler rod TPM - Lower tobacco weight and rod density noted.

4/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.

6/73

Cigarette length increased (97.8 to 98.7 mm).

10/74

Fiber shape changed (Y to I).

3/75

Design changed on tipping paper, package and carton.

5/75

Tipping paper length increased from 30 to 32 mm.

1/76

Tar (2 mg) and nicotine (0.1 mg) decreased by increasing filter length from 25 to 27 mm and increasing paper porosity.

3/76

Expanded stem level increased from 4 to 10%.

9/76

EVE MENTHOL 100

100 mm cigarette in new pack with floral design - Tipping paper also has a floral design.

6/70

Addition of expanded RKS to blend replacing a portion of regular RKS.

3/72

Change in filter length (20 to 25 mm) and fiber denier (3.3 to 4.6). No change in smoke deliveries.

12/72

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EVE MENTHOL 100 (cont.)

Reconstituted tobacco content increased (22 to 26%) -
Resulted in lower total alkaloids, tar (1 mg) and
nicotine (0.1 mg). 5/73

Expanded tobacco added to blend (7%) resulting in lower
tobacco weight and rod density. 6/73

Fiber denier (3.4 to 4.5) and fiber shape (X to I)
changed. Filter weight increased. No change in smoke
deliveries. 4/75

Design changed on tipping paper, package and carton. 5/75

Tipping paper length increased from 30 to 32 mm. 1/76

Tar (3 mg) and nicotine (0.1 mg) decreased by increasing
filter length (25 to 27 mm) and increasing paper porosity.
Menthol in smoke decreased (0.6 to 0.5 mg). 4/76

Expanded stem level increased from 4 to 10%. 9/76

EVE 120

Plain - test marketed - 21 mm circumference and filter
ventilation of 50% - White cigarette paper and packaged in
a crush-proof box. 3/76

EVE MENTHOL 120

Menthol - test marketed - 21 mm circumference and filter
ventilation of 50% - White cigarette paper and packaged in
a crush-proof box. 3/76

EVE ULTRA 120 (BOX)

Distributed nationally - delivers 5 mg tar and 0.5 mg nicotine. 11/88

EVE ULTRA MENTHOL 120 (BOX)

Distributed nationally - delivers 6 mg tar, 0.6 mg nicotine
and 0.4 mg smoke menthol. 11/88

L.A.M. 80 (BOX)

Introduced - delivers 25 mg tar. 12/57

Tobacco weight decrease. 12/62

Tobacco weight decrease (0.707 to 0.675 g) - tar decreased
(16.5 to 14.3 g). 7/78

Tar decreased (13.2 to 12.4 mg) due to filter length
increase (20 to 21 mm). 1/82

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L & M 85

Citrate to phosphate paper.	10/60
Lighter, dull cellulose acetate filter on all sizes, no changes in efficiency.	9/60-3/61
Faster burning, more porous paper, reduced TPM (5 mg) and nicotine (0.2 mg).	9/62
Alkaloids reduced gradually.	9-12/62
TPM reduced by 1.5 mg - Alkaloids and nicotine delivery also reduced.	4/63
Filler alkaloids increased slightly and fiber denier changed from 2.5 to 2.0 on all sizes.	4/65
Fiber shape (cloverleaf to I) and fiber denier (2.0 to 2.3) changed.	9/65
TPM and nicotine deliveries increased - Filler alkaloids also increased.	12/65
TPM increased - less efficient filter resulting from change in fiber shape and denier.	4/66
Filter length increased, 17 to 20 mm.	10/66
Tar (2 mg) and nicotine (0.1 mg) decreased by lower filler rod TPM.	10/67
Tar (2 mg) and nicotine (0.1 mg) decreased by lower filler rod TPM.	12/67
Nicotine delivery (0.1 mg) increased by higher alkaloids.	7/70
Tar (1 mg) and nicotine (0.1 mg) decreased. Lower tobacco weight and rod density observed.	1/71
Addition of expanded RKS to blend replacing a portion of regular RKS.	3/72
Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.	6/73
Filter length (20 to 21 mm) and tipping paper (24 to 25 mm) increased. Fiber denier (3.5 to 3.0) and fiber shape (Y to I) changed. Alkaloids decreased. Nicotine delivery lower (1.3 to 1.2 mg).	3/75
Tipping paper length increased from 25 to 26 mm.	1/76
Expanded stem level increased from 4 to 10%.	9/76

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L & M 85 (cont.)

A change in paper component from phosphate to citrate reduced the tar (18 to 17 mg) and filler rod TPM (34 to 31 mg). Faster static burning time also noted. 2/77

Lower tar (17 to 15 mg) and nicotine (1.1 to 0.9 mg) deliveries resulting from decrease in tobacco weight and a more porous cigarette paper. Levels of expanded tobacco and expanded stems in blend were increased. 3/78

Increase in filter length (21 to 25 mm) and tipping paper (26 to 30 mm). Filter fiber denier (3.0/Y to 3.7/Y) and paper porosity (13 to 16 sec.) were changed. 12/81

Lower total RTD resulted due to change to mechanically perforated cigarette paper. Increased paper component. 3/83

Decreased paper component (1.4 to 0.5%) and less porous paper (7 to 12 sec.) - decreased puff count (7.6 to 6.6) - Lower tobacco weight (0.650 to 0.619 mg) and rod density (0.223 to 0.210 g/cc) were noted - higher CO delivery (12 to 13 mg). 5/85

Change to perforated cigarette paper. 5/86

L & M LIGHTS 30'S

Distributed in North Carolina - deliver 13 mg tar, 1.2 mg nicotine and has a 23 mm circumference - 30 cigarettes per pack - packed in an 8-7-7-8 configuration - 300 cigarettes per carton. 9/87

L & M FLAVOR LIGHTS 85

Introduced - test market - Low tar (8 mg) and nicotine (0.6 mg) deliveries achieved by filter ventilation. Blend contains no reconstituted tobacco or added stem. Filter contains a 14 mm polyethylene tube originating at the tobacco rod end. 9/76

Filter changed by removing polyethylene tube insert resulted in lower filter ventilation and higher filter RTD. No change in smoke deliveries. 10/80

Discontinued.

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L & M LONG LIGHTS 100

Test marketed - Low tar (8 mg) and nicotine (0.7 mg) deliveries achieved by filter ventilation (56%). Blend contains no reconstituted tobacco or added stem. 27 mm CA filter contains a polyethylene tube insert. Tar listed on package as "Only 8 mg tar."

3/77

Filter change by removing polyethylene tube insert and increasing fiber denier. No change in smoke deliveries.

10/80

Increase in filter length from (27 to 30 mm) and a change to a smaller fiber denier were noted. No change in smoke deliveries.

11/80

L & M LONG LIGHTS MENTHOL 100

Introduced - Tar (8 mg) and nicotine (0.8 mg) - Very similar in characteristics to L & M Long Lights 100.

6/80

Increase in filter length (27 to 30 mm). No change was observed in the smoke deliveries.
Discontinued.

8/81

L & M 100

100 mm cigarette with 20 mm CA filter.

7/67

Tar (2 mg) and nicotine (0.2 mg) reduced by lower filler rod TPM.

10/67

Tar (1 mg) and nicotine (0.1 mg) reduced by a change to a more porous paper.

12/67

Tipping paper increased (24 to 27 mm), no change in smoke deliveries.

3/68

Nicotine delivery (0.1 mg) increased by higher alkaloids.

7/70

Tar (1 mg) and nicotine (0.1 mg) decreased. Lower tobacco weight and rod density observed.

1/71

Filter length (20 to 25 mm) and tipping paper (27 to 30 mm) increased. Fiber denier changed resulting in less efficient filter. Tar (1 mg) and nicotine (0.1 mg) increased.

5/71

Addition of expanded RES to blend replacing a portion of tobacco weight and rod density.

3/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.

6/73

Cigarette length decreased 100 to 99 mm.

9/73

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L & M 100 (cont.)

Fiber shape changed (Z to I).

3/75

Tar (2 mg) decreased resulting from increased filter and tipping paper lengths. A more porous cigarette paper was also noted.

1/76

Expanded stem level increased from 4 to 10%.

9/76

Lower tar (17 to 15 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from decrease in tobacco weight and a change to a more porous cigarette paper. Levels of expanded tobacco and expanded stems in blend were increased.

3/78

Tar (14.3 to 13.2 mg) and nicotine (1.06 to 0.99 mg) reduced - increase in tipping paper length (32 to 35 mm).

2/81

Filter length increased (27 to 30 mm) - higher filter RTD (2.5 to 2.9) - decrease in tobacco weight (0.16 to 0.18 g).

5/81

11% Freon expanded tobacco added to blend.

6/83

Tobacco weight (0.754 to 0.700) and rod density (0.227 to 0.208 g/cc) decreased due to increased amount of freon expanded tobacco in the blend (17 to 28%).

7/83

Tar (13.2 to 12.4 mg) and CO (14.7 to 13.0 mg) deliveries decreased due to the use of perforated cigarette paper that is more porous (24 to 7 sec.) with a higher level of paper component (0.4 to 1.4%).

11/83

L & M MENTROL 100

Introduced - 100 mm mentholated cigarette with 20 mm CA filter.

2/67

Tar (3 mg) decreased as tipping paper length was increased.

11/67

Nicotine delivery (0.1 mg) increased by higher alkaloids.

7/70

Tar (2 mg) and nicotine (0.1 mg) decreased correlating with lower filler rod TPM.

11/71

Addition of expanded RKS to blend replacing a portion of regular RKS.

3/72

Filter length (20 to 25 mm) and tipping paper (27 to 30 mm) increased. No change in filter efficiency or smoke deliveries.

10/72

Cigarette length decreased 100 to 99 mm.

9/73

Fiber shape changed (Y to I).

4/75

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L & M MENTHOL 100 (cont.)

Lower tar (2 mg) and nicotine (0.1 mg) as result of increase in filter length and tipping paper length. Lower tobacco weight and reducing sugars content noted. 6/76

Expanded stem level increased from 4 to 10%. 9/76

Lower tar (17 to 15 mg) delivery observed. A change to a more porous cigarette paper and a reduction in tobacco weight were also noted. 7/78

Discontinued.

L & M SUPERIOR 85

Test market - Texas - delivers 14 mg tar and 1 mg nicotine - packaged in a black pack. 7/83

Discontinued.

LARK 85

Introduced - king size in soft pack - new triple filter containing special carbon granules with gas phase activity. 4/63

Carbon content increased. 4/64

TPM (2 mg) and nicotine (0.1 mg) deliveries decreased. 9/66

Fiber shape changed (I to Y) - no change in smoke deliveries. 1/68

Addition of expanded RKS to blend replacing a portion of regular RKS. 3/72

Reduction in gas phase activity - lower carbon content. 3/72

Alkaloids and reducing sugars higher - Nicotine delivery increased (0.1 mg). 5/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density. 6/73

Tar delivery increased (2 mg) - Filler rod TPM increased indicating blend change. 4/74

Tar delivery (2 mg) decreased correlating with a lower filler rod TPM. 1/76

Tar increased (1 mg) correlating with an increase in filler rod TPM. 5/76

Expanded stem level increased from 4 to 10%. 9/76

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LARK 85 (cont.)

Lower tar (17 to 15 mg) and nicotine (1.3 to 1.1 mg) deliveries resulting from a change to a more porous paper and a lower tobacco weight. An increase in expanded tobacco (5 to 7%) and a decrease in the reconstituted material (16 to 14%) correlated with the lower tobacco weight. Circumference decreased from 25.0 to 24.7 mm. 6/79

Tipping paper length increased (25 to 30 mm) - less porous cigarette paper (7 to 15 sec.) - Tar decreased (14.0 to 3.5 mg). 1/82

Filter length increased (20 to 25 mm) - outer plug of plug-space-plug increased - decrease in tobacco weight. 6/82

Increased level of expanded tobacco (17 to 23%) - decreased tobacco weight and rod density. 7/85

LARK 100

Introduced - 100 mm cigarette with CA-space-CA filter, with space containing approximately 88 mg of carbon. 9/68

Tar (1 mg) increased correlating to a change in paper porosity and slower static burning time. 4/71

Addition of expanded RKS to blend replacing a portion of regular RKS. 3/72

Alkaloids and reducing sugars higher - Nicotine delivery increased (0.1 mg). 5/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density. 6/73

Cigarette length decreased 100 to 99 mm. 9/73

Expanded stem level increased from 4 to 10%. 9/76

Increases in filter length (20 to 25 mm) and tipping paper length (28 to 30 mm) resulted in a slight reduction in tar delivery (18.7 to 18.2 mg). A lower tobacco weight was also noted. 9/77

Lower tar (18 to 16 mg) and nicotine (1.3 to 1.2 mg) deliveries resulting from a change to a more porous cigarette paper and a lighter tobacco weight. Increase in expanded tobacco (5 to 7%). 6/79

Tipping paper length increased (30 to 35 mm) - less porous cigarette paper (7 to 15 sec.) - decrease in tar (14.7 to 14.2 mg). 1/82

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LIGGETT GROUP

A65

LARK 100 (cont.)

Tobacco weight (0.799 to 0.763 g) decreased - increased
filter length (25 to 30 mm).

7/82

Increased level of expanded tobacco (17 to 23%) - decreased
tobacco weight and rod density.

7/85

LARK 11 85

Test marketed - low tar (8 mg) and nicotine (0.5 mg)
cigarette with a 25 mm CA filter with ventilation (47%).
The CA filter has a pocket containing carbon granules
(14 mg). Filter similar in construction to the ones used
by Brown & Williamson on products containing Duolite
granules in filters. Tar listed on pack as "Only 8 mg."

6/77

Discontinued.

LARK LIGHTS 85

Test marketed - 85 mm cigarette delivering 8 mg tar and
0.6 mg nicotine - 25 mm CA filter containing charcoal
granules with 40% ventilation. Blend contains 19% Freon
expanded tobacco.

11/78

The elimination of filter ventilation resulted in an increase
in tar (7.1 to 12.8 mg), nicotine (0.70 to 0.99 mg) and
CO (6.9 to 13.8 mg) deliveries. A change in filter
construction from carbon in a pocket to carbon in a plug-
space-plug filter was noted. An increase in carbon
content (7 to 64 mg) and a more porous cigarette paper
(12 to 7 sec.) were noted. Expanded tobacco decreased
(26 to 15%) and reconstituted tobacco increased (10 to 16%).
This resulted in an increase in tobacco weight (0.589 to
0.640 g). The packaging was changed from white to red.
These cigarettes are now similar to Lark 85.

8/81

Increased level of expanded tobacco (17 to 23%) - decreased
tobacco weight and rod density.

7/85

LARK LIGHTS 100

Test marketed - 100 mm cigarette delivering 7 mg tar and
0.6 mg nicotine - 25 mm CA filter containing charcoal
granules with 40% ventilation. Blend contains 19% Freon
expanded tobacco.

11/78

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LARK LIGHTS 100 (cont.)

The elimination of filter ventilation resulted in an increase in tar (7.2 to 13.1 mg) nicotine (0.65 to 1.08 mg) and CO (6.9 to 13.1 mg) deliveries. A change in filter construction from carbon in a pocket to carbon in a plug-space-plug filter was noted. An increase in carbon content (6 to 65 mg) and a more porous cigarette paper (12 to 6 sec.) were noted. Expanded tobacco decreased (26 to 15%) and reconstituted tobacco increased (10 to 16%). This resulted in an increase in tobacco weight (0.717 to 0.802 g). The packaging was changed from white to red. These cigarettes are now similar to Lark 100.

8/81

Tobacco weight (0.794 to 0.762 g) decreased - increased filter length (25 to 30 mm).

7/82

Increased level of expanded tobacco (17 to 23%) - decreased tobacco weight and rod density.

7/85

Higher CO delivery (13 to 14 mg) resulted from a decreased level of paper component (1.8 to 0.6%).

3/87

MASTERPIECE 85

Introduced - King size in soft pack with "pipe tobacco blend" - High TPN and nicotine.

6/65

Discontinued.

12/65

OASIS 85

Dropped from C.I. History of Brand in C.I. 12/65.

1/68

OSM LUXURY LIGHTS MENTHOL 100

Introduced - test market - Tar (9.2 mg) and nicotine (0.74 mg). The ventilation system consists of one row of laser perforation.

7/81

Discontinued.

PYRAMID 85 (MF)

Introduced nationally - will sell for \$2.50 less per carton than generic cigarettes - delivers 21 mg tar and 1.4 mg nicotine. 1/89

PYRAMID FULL FLAVOR 85

Introduced nationally - will sell for a subgeneric price - delivers 15 mg tar and 1.1 mg nicotine - uses wood pulp cigarette paper.

9/89

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PYRAMID FULL FLAVOR #5 (MENTHOL)

Introduced nationally - will sell for a subgeneric price -
delivers 15 mg tar, 1.1 mg nicotine and 0.5 mg smoke
menthol - uses wood pulp cigarette paper.

9/89

PYRAMID LIGHTS #5

Introduced nationally - will sell for \$2.50 less per carton than
generic cigarettes - delivers 14 mg tar and 1.1 mg nicotine.

1/89

PYRAMID FULL FLAVOR 100

Introduced nationally - will sell for a subgeneric price -
delivers 16 mg tar and 1.3 mg nicotine - uses wood pulp
cigarette paper.

9/89

PYRAMID FULL FLAVOR MENTHOL 100

Introduced nationally - will sell for a subgeneric price -
delivers 16 mg tar, 1.3 mg nicotine and 0.5 mg smoke
menthol - uses wood pulp cigarette paper.

9/89

PYRAMID LIGHTS 100

Introduced nationally - will sell for \$2.50 less per carton
than generic cigarettes - delivers 14 mg tar and 1.1 mg
nicotine.

1/89

PYRAMID LIGHTS MENTHOL 100

Introduced nationally - will sell for \$2.50 less per carton
than generic cigarettes - delivers 14 mg tar, 1.1 mg nicotine
and 0.5 mg smoke menthol.

1/89

PYRAMID ULTRA LIGHTS 100

Introduced nationally will sell for \$2.50 less per carton than
generic cigarettes - delivers 6 mg tar and 0.6 mg nicotine.

1/89

ST. MORITZ 100

Plain - Test marketed - Previously marketed by Larus & Bro.
Blend contains both expanded tobacco and stems. Tar
delivery is 18 mg.

7/74

Tar decreased from 19 to 16 mg.

8/76

Filter length increased 25 to 27 mm.

7/77

Tar decreased 16 to 13 mg; change to a more porous,
mechanically perforated cigarette paper.

7/78

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ST. MORITZ MENTHOL 100

Menthol - Test marketed - Previously marketed by Larus & Bro. Blend contains both expanded tobacco and stems. Tar delivery is 18 mg.

7/74

Lower tar (17 to 14 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from an increase in filter length (25 to 27 mm) and a change to a more porous cigarette paper (22 to 13 seconds).

2/78

Replaced inherently porous cigarette paper with mechanically perforated paper. Decrease in tar (14.4 to 13.7 mg).

7/78

SAVVY LIGHTS 100

Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 10 mg tar and 0.9 mg nicotine.

11/88

SAVVY LIGHTS MENTHOL 100

Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 10 mg tar, 0.9 mg nicotine and 0.4 mg smoke menthol.

11/88

SAVVY ULTRA LIGHTS 100

Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 6 mg tar and 0.6 mg nicotine.

11/88

STRIKE 85

Value entry product distributed in Syracuse and Rochester, New York and Omaha, Nebraska. The pack is silver and burgundy. Similar to L & M 85 in smoke deliveries.

7/84

National.

1/85

STRIKE 100

Value entry product distributed in Syracuse and Rochester, New York and Omaha, Nebraska. The pack is silver and burgundy. Similar to L & M 100 in smoke deliveries.

7/84

National.

1/85

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VELLO 85

Plain - Test marketed 21 mm CA filter with a single row of ventilation holes having a center core of 8.0 Y-shape fibers and an outer periphery of 3.0 I-shape fibers - Filter system developed by Dr. Vello Norman - Tar (12 mg) and nicotine (0.8 mg) deliveries.

10/75

Cigarette re-engineered - Lower tar and nicotine as a result of a change in filter construction and blend formulation.

11/76

Discontinued.

VELLO MENTHOL 85

Menthol - Test marketed 21 mm CA filter with single row of ventilation holes having a center core of 8.0 Y-shape fibers and an outer periphery of 3.0 I-shape fibers - Filter system developed by Dr. Vello Norman - Tar (12 mg) and nicotine (0.8 mg) deliveries.

10/75

Cigarette re-engineered - Changes in filter construction and blend formulation same as for Vello 85 cigarettes.

11/76

Discontinued.

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D. LORILLARD COMPANYASPEN MENTHOL 85

Test marketed - Low tar (9 mg) and nicotine (0.8 mg) with a 25 mm CA filter containing 33% ventilation. High level of citrate in a fast burning cigarette paper. Porous tipping paper with perforated plug wrap.

7/79

Discontinued.

ASPEN MENTHOL 100

Test marketed - Low tar (9 mg) and nicotine (0.8 mg) with a 27 mm CA filter containing 40% ventilation. High level of citrate in a fast burning cigarette paper. Porous tipping paper with perforated plug wrap.

7/79

Discontinued.

BEECH-NUT 85 (NF)

Introduced - nonfilter, king size similar to Old Gold Straights.

7/61

Discontinued.

BISTRO 85

Introduced - test market - Delivers 11 mg tar and 1.02 mg nicotine. The filter system uses micro-mechanical perforation.

9/81

Discontinued.

BISTRO MENTHOL 85

Introduced - test market - Delivers 11 mg of tar, 1.01 mg of nicotine, and 0.35 mg menthol. The filter system uses micro-mechanical perforation.

9/81

Discontinued.

CENTURY GREAT LENGTHS 100

100 mm cigarette with 20 mm CA filter. Name and warning label printed on cellophane - no identification on package.

9/67

Tar (2 mg) reduced by increase in tipping paper (24 to 30 mm).

2/68

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CENTURY GREAT LENGTHS 100 (continued)

Tar (1 mg) and nicotine (0.1 mg) decreased - change in filter - a new 25 mm dual filter with carbon noted. 3/69

Discontinued.

DANVILLE 85

Introduced - king size filter cigarette. 4/66

Discontinued. 12/66

DANVILLE MENTHOL 85

Introduced - mentholated cigarette with 20 mm CA filter. 8/66

Discontinued. 12/66

DUNCAN 85 (NF)

Introduced - king size nonfilter - filler has a larger cut than normal domestic cigarettes. 9/65

Plastic mouthpiece added to cigarette - no filtration from mouthpiece. 11/65

Discontinued.

HARLEY DAVIDSON 85

Test market - Terre Haute, Indiana - 13 mg tar, 0.8 mg nicotine - black pack with Harley Davidson logo. 9/67

Reintroduced as a generic product in Arkansas test market - delivers 11 mg tar and 0.8 mg nicotine. 11/69

HARLEY DAVIDSON LIGHTS 85

Test marketed in Arkansas as a generic product - packaged in a black pack with a gold eagle embossed on the pack - delivers 8 mg tar and 0.7 mg nicotine. 11/69

HELMAR 80

80 mm cigarette - 17 mm CA filter - contains no RKS or reconstituted material. 4/67

Discontinued.

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HERITAGE 85

Introduced - test market - Delivers 10.9 mg tar and 0.93 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Bistro 85, Rebel 85, and Maverick 85.

11/81

Discontinued.

HERITAGE 100

Introduced - test market - Delivers 11.6 mg tar and 1.01 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Rebel 100 and Maverick 100.

11/81

Discontinued.

KENT 80

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight and rod density and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.

12/72

Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased. No change in smoke deliveries noted.

4/77

Decrease in tar delivery (15 to 13 mg) resulting from introduction of filter ventilation (17%). The new diluted filter is referred to on the pack as the Micronite II filter.

6/78

KENT 85

Reconstituted tobacco first observed - Lighter filter with same efficiency.

5/61

Less porous paper with no effect on TPM or nicotine deliveries.

11/61

Alkaloids reduced by 0.1%.

10/63

Fiber shape changed cloverleaf to I.

4/64

Filter length increased 17 to 20 mm.

8/64

Alkaloids and nicotine delivery increased slightly.

7/65

Alkaloids and nicotine delivery increased.

9/65

TPM increased 1 mg.

4/66

TPM decreased 1 mg by an increase in paper porosity.

6/67

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KENT 85 (continued)

Tipping paper increased 24 to 25 mm. 3/69

Reconstituted tobacco content increased (8 to 12%). 4/69

RKS decreased (8 to 4%). 10/69

Reconstituted tobacco increased 10 to 17%. 10/70

Reconstituted tobacco increased (16 to 18%); RKS decreased (8 to 2%). 9/71

RKS decreased 2 to 0%. 10/71

Alkaloids and reducing sugars increased - Nicotine delivery increased (0.1 mg). 5/72

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted. 12/72

Filter length increased (20 to 21 mm). Lower tobacco weight and rod density noted. 7/76

Lower tar (17 to 13 mg) and nicotine (1.1 to 1.0 mg) resulted from the introduction of filter ventilation (27%). New ventilated filter is referred to on pack as the Micronite II filter. 6/77

Decrease in tar delivery (13 to 12 mg) resulting from an increase in filter ventilation. 11/78

KENT MENTHOL 85

Test marketed - Different from Kent 85 plain in many characteristics. 5/71

Discontinued.

KENT 100

Introduced - 100 mm cigarette with 20 mm CA filter. 4/67

Tar (1 mg) reduced by increasing tipping paper (24 to 27 mm). 11/67

Tar (2 mg) and nicotine (0.1 mg) reduced by increasing tipping paper (27 to 30 mm). 1/68

Tar (1 mg) and nicotine (0.1 mg) reduced by a change to a more porous paper. 5/68

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KENT 100 (continued)

RXS decreased (8 to 4%).	10/69
Reconstituted tobacco increased 10 to 17%.	10/70
Fiber shape changed from X-shape to Y-shape - Filter weight decreased - Tar increased (1 mg).	9/71
Reconstituted tobacco increased 16 to 18% - RXS decreased 6 to 2%.	9/71
RXS decreased 2 to 0%.	10/71
Alkaloids and reducing sugars increased - Nicotine delivery increased (0.1 mg).	5/72
Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density puff count, and higher total RTD - Also, lower tar and nicotine deliveries noted.	12/72
Tipping paper length increased 30 to 32 mm - tar (1 mg) and nicotine (0.1 mg) decreased.	11/74
Cigarette length (99.2 to 99.3 mm) decreased. Tobacco weight (0.87 to 0.84 g) decreased.	5/75
Filter length (25 to 27 mm) increased. No change in smoke deliveries.	6/75
Cigarette length increased (99.9 to 99.3 mm).	8/76
Lower tar (19 to 15 mg) and nicotine (1.3 to 1.1 mg) resulted from a change to a more efficient filter (42-52%) and more porous cigarette paper. Higher total and filter RTD's noted.	6/77
Lower tar delivery (15 to 13 mg) resulting from introduction of filter ventilation (30%). Change to a less efficient filter was also noted. The new ventilated filter is referred as the Micronite II filter.	7/77
Decrease in filter ventilation and change to a less porous cigarette paper resulted in an increase in tar delivery (13.6 to 14.5 mg).	12/77
Decrease in tar delivery (14 to 13 mg) resulted from an increase in filter ventilation. Decrease in total RTD was noted.	8/78
Tipping paper length increased (32 to 34 mm) - no changes were noted in filter length or smoke deliveries.	3/87

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KENT MENTHOL 100

100 mm mentholated cigarette similar to Kent 100. 6/70

Filter fiber shape changed from X-shape to Y-shape -
Filter weight decreased. 8/71

Reconstituted tobacco increased 16 to 18% - RKS decreased
6 to 2%. 9/71

RKS decreased 2 to 0%. 10/71

Expanded tobacco added to blend (9%) - Resulted in lower
tobacco weight, rod density, and puff count. Also, lower
tar and nicotine deliveries noted. 12/72

Tipping paper length increased (30 to 32 mm) - Lower tar
(1 mg) and nicotine (0.1 mg). 1/73

Cigarette length (99.1 to 98.3 mm) decreased. Tobacco
weight (0.84 to 0.82 g) decreased. 5/73

Filter length increased from 25 to 27 mm. 5/76

Cigarette length increased (98.3 to 99.2 mm). 8/76

Introduction of filter ventilation at the 25% level resulted
in lower tar delivery (17 to 15 mg). 8/78

KENT III 85

Test marketed - 85 mm cigarette delivering 4 mg tar
and 0.4 mg nicotine. Characterized by high alkaloid blend
(2.8%) containing 19% Freon expanded tobacco. 25 mm dual
CA filter with 63% ventilation. 11/78

Tar (3 to 2 mg) data changed on pack to comply with
FTC Report. 4/82

Tar and nicotine deliveries removed from the pack. 7/83

KENT III 100

Brand extension of Kent III 85. Tar (5 mg) and nicotine
(0.5 mg) deliveries. Brand characterized by a high alkaloid
blend containing 19% expanded tobacco and a dual 27 mm CA
filter with 81% ventilation. Ventilation achieved by 6 rows
of mechanically perforated holes. 10/79

Tar (5 to 4 mg) and nicotine (0.6 to 0.5 mg) data changed
on pack to comply with FTC Report. 4/82

Tar and nicotine deliveries removed from the pack. 7/83

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KENT III 100 (BOX)

Tipping decreased (35 to 34 mm) - lower tar, nicotine and CO deliveries resulted from increased ventilation. 7/87

Tar, nicotine and CO increased as a result of lower ventilation. 11/87

The tar, nicotine and CO deliveries decreased as a result of higher ventilation. A lower total RTD was noted. 1/88

Nationally introduced - similar to Kent III 100 (Soft Pack). 11/84

KENT GOLDEN LIGHTS 85 (BOX)

Introduced nationally - delivers 9 mg tar and 0.7 mg nicotine. 7/85

KENT GOLDEN LIGHTS 85

Plain - Introduced porous tipping paper with perforated plug wrap - Longest tipping paper (32 mm) of any 85 mm cigarette - Tar (9 mg) and nicotine (0.8 mg) deliveries. 11/75

Tar (9 to 8 mg) and nicotine (0.8 to 0.7 mg) deliveries decreased by increasing filter ventilation and paper porosity. Filler alkaloids content decreased. 3/76

Cigarette length increased (84.2 to 84.8 mm). Decrease in red density and total RTD. 12/76

Cigarette length decreased (84.7 to 84.1 mm); lower tobacco weight also noted. 7/78

Lorillard changed the name of Kent Golden Lights 85 to Golden Lights 85. The product is the same; only the name has changed. 10/78

Tar (8 to 7 mg) and nicotine (0.8 to 0.7 mg) values changed on pack to comply with FTC Report. 5/82

Name changed back to Kent Golden Lights 85. 6/83

Increased tar, nicotine and CO deliveries resulted from lower ventilation. 1/86

KENT GOLDEN LIGHTS MENTHOL 85

Test marketed - similar to Golden Lights 85 - Tar (8 mg) and nicotine (0.7 mg) deliveries. 6/76

Lower tar delivery (8.7 to 7.4 mg) resulting from an increase in filter ventilation. 11/77

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KENT GOLDEN LIGHTS MENTHOL 85 (cont.)

Lorillard changed the name of Kent Golden Lights Menthol 85 to Golden Lights Menthol 85. The product is the same; only the name has changed. 10/78

Name changed back to Kent Golden Lights Menthol 85. 6/83

Tar (8 to 9 mg) and CO (8 to 9 mg) deliveries increased due to higher level of paper component (1.3 to 2.1%) - higher filler menthol (1.6 to 2.0 mg) correlated with higher smoke menthol (0.28 to 0.36 mg). 3/84

Paper component decreased (2.1 to 1.6%) - no changes in smoke deliveries. 9/84

Tar (8.7 to 8.0 mg) and CO (9.0 to 7.4 mg) decreased - increased filter ventilation (34 to 43%). 1/85

Increased tar, nicotine and CO deliveries resulted from lower ventilation. 3/86

KENT GOLDEN LIGHTS 100

Introduced - low tar (9 mg) and nicotine (0.8 mg) with 27 mm CA filter containing ventilation (40%). High level of paper component in a fast burning cigarette paper. Poreus tipping paper with perforated plug wrap. Tar (10 mg) and nicotine (0.9 mg) listed on pack. 5/77

Lorillard changed the name of Kent Golden Lights 100 to Golden Lights 100. The product is the same; only the name has changed. 10/78

Nicotine value (0.7 to 0.8 mg) changed on pack to comply with FTC Report. 5/82

Name changed back to Kent Golden Lights 100. 6/83

Tipping decreased (35 to 34 mm). 7/87

KENT GOLDEN LIGHTS 100 BOX

Introduced nationally - delivers 9 mg tar and 0.8 mg nicotine. 7/85

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KENT GOLDEN LIGHTS MENTHOL 100

Introduced - Similar to the Golden Lights 100 cigarettes. 5/77

Lorillard changed the name of Kent Golden Lights Menthol 100 to Golden Lights Menthol 100. The product is the same; only the name has changed. 10/78

Tar data changed on pack (8 to 7 mg) to comply with FTC Report. 6/82

Name changed back to Kent Golden Lights Menthol 100. 6/83

L.T. BROWN 120

Plain - Introduced 120 mm cigarettes - 30 mm CA filter. Tar (20 mg) and nicotine (1.5 mg) deliveries. Dark brown cigarette paper with pin-stripe lines. 6/75

Discontinued.

L.T. BROWN MENTHOL 120

Menthol - Introduced 120 mm cigarettes - 30 mm CA filter. Tar (20 mg) and nicotine (1.5 mg) deliveries. Dark brown cigarette paper with pin-stripe lines. 6/75

Discontinued.

LUKE 85

Test marketed - new 85 mm "full flavor" cigarette - Blend contains expanded tobacco (7%). 1/74

Discontinued.

MAVERICK 85

Test marketed - High alkaloid blend (2.0%) and nicotine delivery (1.6 mg) for Lorillard product - 20 mm CA filter. 11/71

Alkaloids decreased - Sugars increased - Tar (2 mg) and nicotine (0.1 mg) reduced - Filler rod TPM reduced (3 mg). 5/72

Test marketed in Washington State - 85 mm - tar (10.3 mg) and nicotine (0.86 mg) - filter ventilation by band of MP holes. 5/81

Discontinued.

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MAVERICK 100

Test marketed in Washington State - 100 mm, tar (10.6 mg) and nicotine (0.91 mg) - filter ventilation by band of MP holes.

5/81

Discontinued.

MAX SLIM LIGHTS 100 (BOX)

Introduced - Tar (10 mg) and nicotine (0.9 mg) - Two rows mechanical perforation (32% ventilation) - similar to Virginia Slims Lights 100.

2/82

Discontinued.

MAX SLIM LIGHTS MENTHOL 100 (BOX)

Introduced - Tar (10 mg), nicotine (0.9 mg), and menthol (0.39 mg) - Two rows of mechanical perforation (32% ventilation) similar to Virginia Slims Lights Menthol 100.

2/82

Discontinued.

MAX 120

Plain - Introduced 120 mm cigarette with 30 mm CA filter - White cigarette paper - Tar (16 mg) and nicotine (1.2 mg) deliveries.

7/75

MAX MENTHOL 120

Menthol - Introduced 120 mm cigarette with 30 mm CA filter - White cigarette paper - Tar (16 mg) and nicotine (1.2 mg) deliveries.

7/75

NEWPORT 80 (BOX)

Filter length (17 to 20 mm) and tipping paper length (22 to 24 mm) increased. Tar (18 to 16 mg) and nicotine (1.2 to 1.1 mg) deliveries decreased.

2/75

NEWPORT 80 (NON-MENTHOL-BOX)

Test marketed in Penn. - 80 mm, non-mentholated, tar (11.8 mg) and nicotine (1.04 mg) - filter ventilation by band of MP holes.

4/81

Discontinued.

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NEWPORT 15

Less porous paper with no effect on TPM or nicotine delivery.	12/61
Alkaloids decreased by 0.2%.	6/63
Increases observed in TPM and nicotine deliveries - Blend change indicated by increases in total alkaloids.	12/63
Nicotine delivery and filler alkaloids increased.	4/65
TPM and nicotine increased - less efficient filter - change in filter fiber denier.	1/66
Alkaloids and nicotine delivery decreased.	7/66
Filter length increased (17 to 20 mm).	1/67
RKS content increased 8 to 12%.	4/67
Tar (1 mg) and nicotine (0.1 mg) lower, no other changes noted.	7/68
Reconstituted material increased, 8 to 13%.	9/68
Package design change.	10/68
Color of tipping paper changed from white to cork.	11/68
Tar (2 mg), nicotine (0.1 mg), and menthol delivery (0.15 mg) decreased, amount of paper component increased, faster static burning time, filler menthol lower.	8/69
Blend change, higher alkaloids and lower sugars - more porous cigarette paper. No change in smoke deliveries.	11/69
Reconstituted tobacco increased 11 to 16% - RKS decreased 9 to 4%.	10/70
Reconstituted tobacco increased 16 to 18% - RKS decreased 6 to 0%.	9/71
Fiber shape changed X to Y.	11/71
Tar delivery (1.5 mg) and filler rod TPM (2 mg) decreased - Alkaloids increased.	5/72
Tar (1 mg) and nicotine (0.2 mg) increased - Changes noted in total alkaloids and paper porosity. Fiber shape and denier change correlating with a more efficient filter.	8/72

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2031438489

NEWPORT 85 (cont.)

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted. 12/72

Tar (2 mg) and nicotine (0.1 mg) deliveries were higher - Increase in filler rod TPM and filler alkaloids content. 5/76

Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased. 12/76

NEWPORT 85 25's

Test marketed in Pennsylvania - similar to Newport 85 - 200 cigarettes per carton - eight packs per carton. 7/85

Test market expanded - all East Coast. 3/86

NEWPORT 85 (NON-MENTHOL-BOX)

Test marketed in Penn. - 85 mm, non-mentholated, tar (13 mg) and nicotine (1.08 mg) - filter ventilation by band of MP holes. 4/81

Discontinued.

NEWPORT 100

Introduced - 100 mm mentholated cigarette with 20 mm CA filter. 6/67

Tar (3 mg) and nicotine (0.2 mg) reduced by increase in tipping paper length (24 to 30 mm). 7/68

Filter length increased 20 to 25 mm, no change in smoke deliveries. 9/68

Tar (3 mg) increased - Filter length (20 to 25 mm) and fiber denier change - Also, tipping paper changed from white to cork. 11/68

Menthol in smoke and filler decreased. 9/69

Blend change, higher alkaloids and lower sugars - more porous cigarette paper - No change in smoke deliveries. 11/69

Reconstituted tobacco increased 11 to 16%. 10/70

RKS decreased 7 to 3%. 9/71

RKS decreased 3 to 0%. 10/71

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2031438490

NEWPORT 100 (cont.)

Tar (2 mg) and nicotine (0.3 mg) were increased by changes in total alkaloids and paper porosity - Fiber shape and denier changed.

8/72

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, puff count, and higher total RTD - Also, lower tar and nicotine deliveries noted.

12/72

Blend change - Higher alkaloids and increased filler rod TPM delivery resulting in higher tar (1 mg) and nicotine (0.1 mg).

7/74

Tipping paper length (30 to 32 mm) increased. Tar (20 to 19 mg) and nicotine (1.4 to 1.3 mg) deliveries decreased.

2/75

Cigarette length (99.2 to 98.3 mm) decreased. Lower tobacco weight noted. No change in smoke deliveries.

4/75

Increase in tar (1 mg) and nicotine (0.1 mg) resulting from a change to a less porous paper - Filter length increased from 25 to 27 mm.

11/75

Tar (2 mg) and nicotine (0.1 mg) deliveries were higher - Increase in filler rod TPM and filler alkaloids content.

5/76

Cigarette length increased (98.2 to 99.3 mm).

12/76

Tipping paper length increased (32 to 34 mm) - no changes were noted in filter length or smoke deliveries.

3/87

NEWPORT 100 25's

Test marketed in Pennsylvania - similar to Newport 100 - 200 cigarettes per carton - eight packs per carton.

7/85

Test market expanded - all East Coast.

3/86

Tipping paper length increased (32 to 34 mm) - no changes were noted in filter length or smoke deliveries.

3/87

NEWPORT 100 (BOX)

Test marketed in Connecticut - tar 20 mg, nicotine 1.6 mg.

6/84

Discontinued.

NEWPORT LIGHTS 85 (BOX)

Test marketed - Tar (8 mg) and nicotine (0.7 mg) - Low delivery result of 33% filter ventilation with porous tipping paper. Similar to physical characteristics and blend composition of Newport Lights 85.

3/80

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2031438491

NEWPORT LIGHTS 85

Test marketed - low tar (10 mg) and nicotine (0.8 mg).
Characterized by a 25 mm CA filter with ventilation (27%) and
a high level of paper component in a fast burning cigarette
paper. Ventilation system utilizes porous tipping paper.

5/77

Increased tar and CO deliveries resulted from lower
ventilation.

1/86

NEWPORT LIGHTS 100

Introduced - nationally - Delivers 9 mg tar, 0.78 mg
nicotine, and 0.36 mg of menthol. The low delivery is
achieved by using porous tipping paper.

9/81

Increased tar, nicotine and CO deliveries resulted from
lower ventilation - higher total RTD resulted.

1/86

Decreased tar, nicotine and CO deliveries resulted from
higher ventilation - lower total RTD resulted.

3/86

Tar (10 to 9 mg), CO (9 to 7 mg) and smoke menthol (0.4 to
0.3 mg) deliveries decreased as a result of increased
ventilation (37 to 44%) - A lower total RTD was observed
(108 to 101 mm).

9/89

NEWPORT LIGHTS 100 (BOX)

Test marketed in Connecticut - tar 9 mg, nicotine 0.8 mg.

5/84

Discontinued.

NEWPORT LIGHTS MENTHOL 100

Tar (10 to 9 mg), CO (9 to 7 mg) and smoke menthol

NEWPORT SLIM LIGHTS MENTHOL 100 (BOX)

Test marketed - delivers 8 mg tar, 0.7 mg nicotine and
0.6 mg smoke menthol.

3/86

NEWPORT STRIPES 100 (BOX)

Test market - New York - delivers 11 mg tar, 0.8 mg nicotine -
only nonmentholated Newport on the market.

9/87

NEWPORT STRIPES 100 MENTHOL (BOX)

Test market - New York - delivers 11 mg tar, 0.8 mg nicotine -
only non-mentholated Newport on market.

9/87

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OLD GOLD 80 (BOX)

Introduced in flip-top box - Similar to Old Gold 85.

5/74

Discontinued.

OLD GOLD 100

Introduced - 100 mm cigarette with 25 mm CA filter.

5/69

Coupon added to pack.

6/69

Reconstituted tobacco increased 10 to 16% - RKS decreased 9 to 4%.

10/70

Filter length (25 to 27 mm) increased - Tipping paper length (30 to 32 mm) increased. Tar (21 to 20 mg) and nicotine (1.4 to 1.3 mg) deliveries decreased.

2/75

OLD GOLD FILTER 85

Alkaloids reduced by 0.2%, nicotine delivery decreased.

1/63

Nicotine delivery and filler alkaloids increased - TPM increased slightly.

4/65

Filter length (17 to 20 mm) and fiber denier increased - tobacco weight decreased.

5/65

Coupon added to pack.

1/66

TPM (2 mg) and nicotine (0.1 mg) deliveries increased.

7/66

Reconstituted tobacco content increased (9 to 12%).

5/70

Reconstituted tobacco increased 10 to 16% - RKS decreased 8 to 5%.

10/70

Reconstituted tobacco increased 16 to 19% - RKS decreased 6 to 0%.

9/71

Filter fiber shape (I to Y) and denier (3.6 to 3.0) changed - No change in smoke deliveries.

10/71

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and higher total RTD - Also, lower puff count, tar, and nicotine deliveries were noted.

12/72

Tipping paper length increased 24 to 25 mm.

9/73

Filter length (20 to 21 mm) and tipping paper length (25 to 26 mm) increased.

11/74

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OLD GOLD FILTER 85 (cont.)

Tar (1 mg) and nicotine (0.1 mg) increased as result of increase in filler rod TPM. 12/76

Lower tar (17 to 16 mg) and filler rod TPM deliveries observed resulting from a decrease in tobacco weight. 9/78

Coupon dropped from pack. 11/79

OLD GOLD LIGHTS 85

Introduced on test market - Low delivery (9 mg tar and 0.8 mg nicotine) cigarettes characterized by 25 mm CA filter with 34% ventilation. Ventilation achieved using porous tipping paper. Further characterized by a high level of paper component on cigarette paper. 8/77

OLD GOLD STRAIGHTS 85 (NF)

Long to king size. 5/60

OLD GOLD LIGHTS 100

Test marketed - delivers 12 mg tar and 0.9 mg nicotine. 5/85

REBEL 85

Introduced - test market - These cigarettes deliver 11.1 mg tar and 0.96 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Maverick 85. 10/81

Discontinued. 4/83

REBEL 100

Introduced - test market - These cigarettes deliver 10.9 mg tar and 0.99 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Maverick 100. 10/81
Discontinued. 4/83

REDFORD 85

Test marketed - new 85 mm "full flavor" cigarette - Similar to Old Gold 85. 4/73

Discontinued.

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2031438494

SATIN 100

Test marketed - delivers 11 mg tar and 0.9 mg nicotine - two rows of mechanical perforation.

6/82

Tipping increased (32 to 34 mm).

7/87

SATIN MENTHOL 100

Test marketed - delivers 11 mg tar, 0.9 mg nicotine and 0.39 mg menthol in smoke - two rows of mechanical perforation.

6/82

Tipping increased (32 to 34 mm).

7/87

SATIN 100 - COLORED PACKS

Introduced Satin 100 cigarettes in pink, yellow, and blue packs - cigarettes similar to Satin 100.

11/85

SPRING 85

Spring 85 replaced by Spring 100 in March, 1967 (History of Spring 85 in C.I. 1/72).

3/67

Discontinued.

SPRING 100

Introduced - 100 mm mentholated cigarette with 20 mm CA filter.

3/67

Tar (1 mg) reduced by increasing tipping paper (24 to 27 mm).

11/67

Tar (2 mg) and nicotine (0.2 mg) reduced by increasing tipping paper (27 to 30 mm).

1/68

Filter length increased (20 to 25 mm) - Tar increased (2 mg). 1/69

Reconstituted tobacco increased 6 to 9% - RKS decreased 8 to 5%.

10/70

Reconstituted tobacco increased 11 to 18% - RKS decreased 8 to 0%.

9/71

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and puff count - Also, lower tar and nicotine deliveries noted.

12/72

Cigarette length (99.2 to 98.4 mm) decreased. Tar (20 to 19 mg) and nicotine (1.1 to 1.0 mg) decreased.

3/75

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SPRING 100 (continued)

Tar (1 mg) decreased by a change in tipping paper length
(30 to 32 mm). 11/75

Filter length (25 to 27 mm) and fiber denier (6.6 to
7.6 mm) increased - Filler alkaloids increased. 4/76

Cigarette length increased (98.7 to 99.3 mm). 12/76

SPRING LEMON LIGHTS 85

Test marketed in Connecticut - Delivers 9 mg tar and 0.7 mg
nicotine - the lemon flavor source is citral. 5/89

SPRING LEMON LIGHTS 85 (MENTHOL)

Test marketed in Connecticut - Delivers 9 mg tar, 0.7 mg
nicotine and 0.4 mg smoke menthol - the lemon flavor
source is citral. 5/89

SPRING LEMON LIGHTS 100

Test marketed in Connecticut - Delivers 11 mg tar and 0.8 mg
nicotine - the lemon flavor source is citral. 5/89

SPRING LEMON LIGHTS 100 MENTHOL

Test marketed in Connecticut - Delivers 11 mg tar, 0.8 mg
nicotine and 0.5 mg smoke menthol - the lemon flavor source
is citral. 5/89

TRIUMPH 85

Test marketed - 85 mm cigarette delivering 4 mg tar and
0.4 mg nicotine. Characterized by high alkaloid blend
(2.8%) containing 19% Freon expanded tobacco. 25 mm dual
CA filter with 60% ventilation. 11/78

TRIUMPH MENTHOL 85

Test marketed - 85 mm menthol cigarette delivering 4 mg
tar and 0.4 mg nicotine. Characterized by high alkaloid
blend (2.8%) containing 19% Freon expanded tobacco.
25 mm dual CA filter with 60% ventilation. 11/78

Tar (5 to 4 mg) and nicotine (0.6 to 0.5 mg) data changed
on pack to comply with FTC Report. 5/82

TRIUMPH 120

Test marketed in New York - 100 mm, tar (4.7 mg) and
nicotine (0.56 mg) - 6 rows of MP ventilation holes. 3/81

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TRIUMPH MENTHOL 100

Test marketed in New York - 100 mm, tar (4.9 mg) and nicotine (0.58 mg) - 7 rows of MP ventilation holes.

3/81

TRUE 85

Introduced - king size filter cigarette with dual filter consisting of 10 mm CA and 10 mm polyethylene mouthpiece.

4/66

TPM decreased, 2 mg by increasing filter ventilation.

10/66

Tar decreased (1 mg) - A lower tobacco weight and filler rod TPM noted.

11/68

Reconstituted tobacco increased 10 to 14% - RKS decreased 8 to 3%.

10/70

Reconstituted tobacco increased 13 to 17% - RKS decreased 6 to 2%.

9/71

RKS decreased 2 to 0%.

10/71

Fiber shape changed C to Y-shape - No change in deliveries.

11/72

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.

12/72

Filter length increased (20 to 25 mm) - Lower tobacco wt. New 5 mg tar version introduced. Lower tar achieved by increased filter ventilation and lower tobacco weight. Expanded tobacco level increased (11 to 23%).

10/74

7/76

Cigarette length decreased 84.7 to 84.0 mm.

6/78

Tar (5 to 4 mg) data changed on pack to comply with FTC Report.

5/82

Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco.

11/83

Re-engineered versions in national distribution - uses laser perforation and lower level of expanded tobacco.

5/84

New package design - silver package with small "True" filter symbol - test marketed in January, 1987 in Minnesota - national in May, 1987.

5/87

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2031438497

TRUE MENTHOL 85

Introduced - Similar to True filter except for presence of menthol. 9/66

Reconstituted tobacco increased 13 to 17% - RKS decreased 6 to 2%. 9/71

RKS decreased 2 to 0%. 10/71

Fiber shape changed C to Y-shape - No change in deliveries. 11/72

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted. 12/72

Filter length increased 20 to 25 mm - Lower tobacco weight. New 5 mg tar version introduced. Cigarettes are similar to True 85. 1/75

Lower tar (6.5 to 5.0 mg) and nicotine (0.5 to 0.4 mg) observed correlating with an increase in filter ventilation. Increased filter ventilation resulted from decreasing the number of rows of ventilation holes (from 9 to 5) in the tipping paper and using a more porous combining plug wrap. 2/77

Cigarette length decreased 84.5 to 84.0 mm. 6/78

Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco. 11/83

Re-engineered versions in national distribution - uses laser perforation and lower level of expanded tobacco. 5/84

New package design - silver package with small "True" filter symbol - test marketed in January, 1987 in Minnesota - national in May, 1987. 5/87

TRUE GOLD 85

Introduced nationally in a gold pack - cigarette has cork tipping and delivers 10 mg tar and 0.8 mg nicotine. 11/85

TRUE ULTRA ONE 85

Test marketed - ultra low tar (2 mg) and nicotine (0.2 mg) - 25 mm CA filter with 62% ventilation (6 rows of mechanically perforated). 11/80

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2031438498

TRUE 100

Plain - test marketed - 12 mg tar and 0.8 mg nicotine -
Blend contains 13% expanded tobacco. 4/74

Cigarette length (99.5 to 97.9 mm) decreased. 6/75

Cigarette length (98.1 to 99.2 mm) increased - Lower
tobacco weight and rod density. 6/76

Filter length increased (25 to 27 mm). Tobacco wt. decreased. 7/76

Tar (13 to 8 mg) and nicotine (0.9 to 0.7 mg) decreased
resulting from an increase in filter ventilation and a lower
tobacco weight. A blend change indicated by a higher
filler alkaloid content, lower reducing sugars and a
higher expanded tobacco level (9 to 18%). 8/79

Test marketing re-engineered version in New Mexico - uses
laser perforation and a lower level of expanded tobacco. 11/83

Re-engineered versions in national distribution - uses
laser perforation and lower level of expanded tobacco. 5/84

New package design - silver package with small "True" filter
symbol - test marketed in January, 1987 in Minnesota -
national in May, 1987. 5/87

Tipping increased (32 to 34 mm). 7/87

TRUE MENTHOL 100

Menthol - Test marketed - 12 mg tar and 0.8 mg nicotine -
Blend contains 13% expanded tobacco. 4/74

Cigarette length (99.4 to 98.3 mm) decreased. 6/75

Cigarette length (98.3 to 99.1 mm) increased - Lower
tobacco weight and rod density. 6/76

Filter length increased (25 to 27 mm). Tobacco weight
decreased. 7/76

Tar (13 to 9 mg) and nicotine (0.9 to 0.7 mg) decreased
resulting from an increase in filter ventilation and a lower
tobacco weight. A blend change indicated by a higher
filler alkaloid content, lower reducing sugars and a
higher expanded tobacco level (9 to 18%). 8/79

Test marketing re-engineered version in New Mexico - uses
laser perforation and a lower level of expanded tobacco. 11/83

Re-engineered version in national distribution - uses
laser perforation and lower level of expanded tobacco. 5/84

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2031438499

TRUE MENTHOL 100 (cont.)

New package design - silver package with small "True" filter symbol - test marketed in Minnesota. 1/87

Tipping paper length increased (32 to 34 mm) - no changes were noted in filter length or smoke deliveries. 3/87

New package design - national. 5/87

TRUE GOLD 100 (SOFT PACK)

Introduced nationally in a gold pack - cigarette has white tipping and delivers 11 mg tar and 0.9 mg nicotine. 11/85

TRUE GOLD 100 BOX

Introduced nationally in a gold box - cigarette has white tipping and delivers 11 mg tar and 0.9 mg nicotine. 11/85

YORK 88

Introduced - dual filter, carbon on tow filter - Filter has gas phase activity. 3/64

Introduced - dual filter, bonded carbon filter - Filter has gas phase activity. 4/64

Discontinued. 12/67

YORK 90 (NF)

Introduced - Imperial Size (N-F, 90 mm). 8/61

Dropped from C.I. (History of Brand in C.I. 5/64). 3/64

YORK 100

Introduced - 100 mm cigarette with 20 mm CA filter. 3/67

Discontinued. 12/67

ZACK 80

Introduced - package looks like blue denim - No unusual characteristics. 10/74

Discontinued.

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ZACK #5

Introduced - package looks like blue denim - No unusual characteristics.

10/74

Discontinued.

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2031438501

E. REYNOLDS TOBACCO COMPANYBRANDON 85 (NF)

Introduced - king size, nonfilter. 2/62

Discontinued. 12/65

BRIGHT 85

Test market - Tar (6 mg), nicotine (0.5 mg) and menthol (0.5 mg) - one row mechanical perforation. 7/82

National distribution. 11/82

Filter length increased (25 to 27 mm) - tobacco weight decreased (0.638 to 0.610 g) - filter RTD increased (4.3 to 4.7 in.). 11/83

More porous cigarette paper (24 to 17 sec.) with increased paper component (0.4 to 0.3%) used on brand - Increased filler menthol (3.1 to 3.4 mg) resulted in higher smoke menthol (0.43 to 0.56 mg). 3/84

Discontinued. 1/87

BRIGHT 100

Test market - Tar (6 mg), nicotine (0.5 mg) and menthol (0.5 mg) - one row mechanical perforation. 7/82

National distribution. 11/82

Increased level of paper component (0.4 to 1.4%) - higher filler menthol (4.1 to 4.5 mg) resulted in higher smoke menthol (0.49 to 0.56 mg). 3/84

Filter length increased (27 to 31 mm) - tobacco weight decreased (0.780 to 0.736 g). 9/84

BROOKWOOD MENTHOL 85

Test marketed - Tar (9 mg) - Cigarette has a high alkaloid blend with filter ventilation consisting of two rows of mechanically perforated holes. Very similar to the Real Menthol 85 already on the market. 8/79

Discontinued.

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2031438502

CAMEL 70 (NY)

Nicotine delivery and filler alkaloids decreased. 2/62

Nicotine delivery and filler alkaloids increased. Also
RTD decreased 0.3 inches of M20. 2/65

Expanded tobacco (7%) noted in blend of some cigarettes. 12/69

Expanded tobacco observed in all cigarettes - Tobacco
weight lower - No change in tar or nicotine. 3/70

Filler alkaloids reduced (0.2%) correlating with a lower
nicotine delivery. 11/75

Level of reconstituted tobacco increased from 9 to 16%. 9/78

Tar (24 to 19 mg), nicotine (1.7 to 1.4 mg), and CO
(15 to 11 mg) deliveries were noted as a result in a
change to a more porous cigarette paper and a change
in the type paper component (phosphate to citrate). 11/80

CO delivery increased (12.6 to 15.8 mg) correlating with
a change to less porous paper (17 to 25 sec.) - paper
component increased (0.4 to 1.4%). 3/83

Tobacco weight (0.798 to 0.772 g) and rod density (0.233 to
0.224 g/cc) decreased. 12/89

CAMEL FILTER 80 (ROM)

Plain - introduced in flip top box similar to Camel Filter
85 - Tar (19 mg) and nicotine (1.3 mg) deliveries. 10/75

CAMEL FILTER 85

Introduced in three different packages - king size with
a 20 mm CA filter. 10/65

Blend change noted in cigarette marketed in brown pack -
lower alkaloids resulting in lower nicotine. 4/66

TPM (4 mg) and nicotine (0.2 mg) decreased as result of
increase in filter efficiency. 3/67

TPM (2 mg) and nicotine (0.1 mg) decreased as result of
change in blend. 4/67

Reconstituted material increased, 19 to 24%. 9/68

Expanded tobacco (9%) noted in blend - no change in tar
or nicotine deliveries - Tobacco weight lower. 3/70

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CAMEL FILTER 85 (continued)

The amount of expanded tobacco increased (9 to 12%) -
Nicotine delivery decreased (0.1 mg). 3/71

Filter length (20 to 21 mm) and tipping paper (24 to 25 mm)
increased. Lower tar (1 mg) and nicotine (0.1 mg)
deliveries observed. 10/72

Filler alkaloids reduced (0.1%). 11/75

Tar (13.5 to 13.8 mg), nicotine (1.19 to 1.02 mg) and CO
(17 to 14.4 mg) decreased - achieved filter ventilation
(0 to 13%) by band of ESP holes. 4/81

Test marketed packs containing 12 cigarettes per pack. 3/83

Tobacco weight (0.752 to 0.718 g) and rod density
(0.241 to 0.229 g/cc) decreased. 7/89

CAMEL FILTER 100

National distribution - delivers 18 mg tar and 1.1 mg
nicotine. 7/87

CAMEL MENTHOL 85

Introduced - 85 mm mentholated cigarette with 20 mm
CA filter. 9/66

TPM (4 mg) and nicotine (0.2 mg) decreased as result of
a blend change. 9/67

Discontinued.

CAMEL LIGHTS 80 (BOX)

Test marketed - Tar (8 mg) and nicotine (0.8 mg) -
Similar in characteristics to Camel 85's. 4/80

CO (7.1 to 8.1 mg) increased - change to less porous
cigarette paper (16 to 30 sec.) - paper component
(0.9 to 1.4%) increased. 8/82

Tobacco weight (0.677 to 0.727 g) and rod density (0.250
to 0.264 g/cc) increased - decreased amount of expanded
tobacco (18 to 11%) - decreased total alkaloids observed
(1.99 to 1.59%). 9/82

Tar delivery increased (7.8 to 9.1 mg) due to decreased
ventilation - Paper component decreased (1.4 to 0.9%).
Paper porosity increased (29 to 16 sec.). 5/83

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CAMEL LIGHTS 80 (BOX) (cont.)

Re-engineered - blend contains two different types of reconstituted material - delivers 10 mg tar and 0.7 mg nicotine. 5/86

Tobacco weight (0.674 to 0.652 g) and rod density (0.227 to 0.217 g/cc) decreased. 12/89

CAMEL LIGHTS 85

Introduced on test market - Low delivery cigarettes (10 mg tar and 0.8 mg nicotine) characterized by a 25 mm CA filter with 32% ventilation and a high alkaloid blend. 9/77

Tar (10 to 8 mg) and nicotine (0.9 to 0.8 mg) decreased from an increase in filter ventilation (25 to 35%). 4/80

Test marketed packs containing 12 cigarettes per pack. 3/83

Filter length increased (25 to 27 mm) - rod density increased (0.233 to 0.245 g/cc). 9/83

Less porous cigarette paper (16 to 24 sec.) with higher level of paper component (0.7 to 1.5%). 11/83

A lower level of paper component was observed. 3/88

Tar (9 to 11 mg), nicotine (0.7 to 0.8 mg) and CO (11 to 12 mg) deliveries increased as a result of lower ventilation (24 to 16%). Lower total (134 to 120 mm) and filter (117 to 86 mm) RTD were noted. Tobacco weight (0.689 to 0.642 g) and rod density (0.244 to 0.227 g/cc) decreased. 7/89

CAMEL LIGHTS 100

Introduced - 12 mg tar and 1.2 mg nicotine - Very similar to Winston Lights 100's. 4/79

Tar (11.3 to 9.7 mg), nicotine (0.88 to 0.77 mg) and CO (14.5 to 13.6 mg) deliveries decreased - increased ventilation (20 to 26%) - increased filter length (27 to 31 mm) and weight (0.17 to 0.19 g) - decreased tobacco weight (0.851 to 0.808 g) - tipping paper length increased (34 to 35 mm). 5/84

Filter ventilation increased (16 to 33%) - CO decreased (13.8 to 11.4 mg) - ventilation changed from mechanical to electrostatic perforation - lower total RTD (144 to 117 mm of H2O) was noted. 3/85

Tobacco weight (0.822 to 0.778 g) and rod density (0.243 to 0.230 g/cc) decreased. 7/89

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CAMEL TALLS 100

Test marketed - similar to Winston 100 in most characteristics. 9/71

Removed from market. 4/72

CENTURY 85

National distribution in 33 states - 25 cigarettes per pack -
14 mg tar and 1 mg nicotine. 7/83

New package graphics. 7/87

CENTURY LIGHTS 85

National distribution in 33 states - 25 cigarettes per pack -
9 mg tar and 0.8 mg nicotine. 7/83

New package graphics. 7/87

The tar and CO deliveries decreased as a result of increased
ventilation. A shorter tipping paper length (28 to 27 mm)
was noted. 5/88

CENTURY 100

National distribution in 33 states - 25 cigarettes per pack -
11 mg tar and 1 mg nicotine. 1/84

New package graphics. 7/87

CENTURY LIGHTS 100

National distribution in 33 states - 25 cigarettes per pack -
11 mg tar and 1 mg nicotine. 1/84

New package graphics. 7/87

CENTURY LIGHTS MENTHOL 100

Test marketed - 25 cigarettes per pack - 12 mg tar, 0.7 mg
nicotine and 0.5 mg smoke menthol - 225 cigarettes for the
price of 200. 11/85

CHELSEA 100 (BOX)

Test marketed in Florida and Pennsylvania - delivers 10 mg
tar and 0.7 mg nicotine - ethylvanillin gives the sidestream
smoke a sweet smell. 3/89

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CHELSEA 100 MENTHOL (BOX)

Test marketed in Florida and Pennsylvania - delivers 10 mg tar, 0.7 mg nicotine and 0.7 mg smoke menthol - ethylvanillin gives the sidestream smoke a sweet smell.

3/89

DAWN 120

Introduced 120 mm cigarette - white cigarette paper with thin gray parallel lines (filigrain) - Tar (20 mg) and nicotine (1.5 mg) deliveries. 21 mm circumference.

5/75

Discontinued.

12/76

DAWN MENTHOL 120

Introduced 120 mm menthol cigarette - white cigarette paper with thin gray parallel lines (filigrain) - tar (20 mg) and nicotine (1.5 mg) deliveries. 21 mm circumference.

5/75

Discontinued.

12/76

DORAL 85

Plain (85 mm) model introduced - 25 mm filter, 10 mm CA, and 15 mm plastic sections and utilizes filter ventilation.

11/68

Expanded tobacco (6%) noted in blend since Sept., 1969.

11/69

Reconstituted tobacco in blend increased (20 to 23%) in Doral 85 Plain. Tar delivery increased (1 mg) - filter ventilation decreased (30 to 24%).

4/71

Tar delivery increased (1 mg) - Filter ventilation decreased (24 to 21%).

8/71

Tar delivery decreased by a change to a more porous cigarette paper and a lower filler alkaloid content - Tar (2 mg) and nicotine (0.1 mg) decreased.

9/75

Tar (1 mg) and nicotine (0.1 mg) increased as result of increase in filler rod TPM.

11/76

Discontinued.

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DORAL MENTHOL #5

Mentholated (#5 mm) model introduced - 25 mm filter, 10 mm CA, and 15 mm plastic sections and utilizes filter ventilation. 11/68

A green plug wrap was placed between the plastic mouthpiece and outer plug wrap on Doral Menthol. 6/69

Expanded tobacco (6%) noted in blend since September, 1969. 11/69

The amount of expanded tobacco increased (6 to 8%) and the amount of filter ventilation increased. The tar decreased (1 mg). 2/71

Tar delivery increased (1 mg) - Filter ventilation decreased (30 to 24%). 4/71

Tar delivery increased (1 mg) - Filter ventilation decreased (24 to 21%). 8/71

Tar delivery decreased by a change to a more porous cigarette paper and a lower filler alkaloid content - Tar (2 mg) and nicotine (0.1 mg) decreased. 9/75

Higher tar (12.3 to 13.7 mg) and nicotine (0.9 to 1.0 mg) were noted corresponding to a decrease in filter ventilation. 3/77

Discontinued.

DORAL II #5

Test marketed - These new Doral II cigarettes deliver 5 mg tar and 0.5 mg nicotine - 25 mm CA filter with 60% ventilation and a high level of paper component in the cigarette paper - 1% Freon expanded tobacco in the blend. 2/79

Discontinued.

DORAL II MENTHOL #5

Test marketed - These new Doral II Menthol cigarettes deliver 5 mg tar and 0.5 mg nicotine - 25 mm CA filter with 60% ventilation and a high level of citrate in the cigarette paper - 1% Freon expanded tobacco in the blend. 2/79

Tar (5.3 to 3.8 mg), nicotine (0.48 to 0.41 mg) and CO (4.2 to 3.2 mg) lowered - increase in filter ventilation (53 to 65%); lower total RTD (3.6 to 2.8). 2/81

Paper component in cigarette paper decreased - higher puff count (7.2 to 7.5). 4/81

Discontinued.

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DORAL FILTER LIGHTS 85

Value entry product - test marketed in 13 states - delivers 12 mg tar - contains highest level of reconstituted material (32%).

5/84

National distribution.

New package graphics.

7/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. Ventilation was added (28%) which resulted in lower tar and CO deliveries and total RTD.

5/88

DORAL FILTER LIGHTS MENTHOL 85

Value entry product - test marketed in 13 states - delivers 12 mg tar - contains highest level of reconstituted material (32%).

5/84

National distribution.

New package graphics.

7/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. Ventilation was added (32%) which resulted in lower tar and CO deliveries and total RTD.

5/88

The level of expanded tobacco decreased (25 to 19%) resulting in a higher tobacco weight (0.557 to 0.606 g) and rod density (0.203 to 0.213 g/cc).

12/89

DORAL FILTER LIGHTS 100

Value entry product - test marketed in 13 states - first 100 mm cigarette introduced using Doral name.

5/84

National distribution.

New package graphics.

7/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. Ventilation increased resulting in lower tar and CO deliveries and total RTD.

5/88

Tar (10 to 11 mg), nicotine (0.8 to 0.9 mg) and CO (9 to 10 mg) deliveries increased as a result of lower ventilation (41 to 34%).

11/89

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DORAL FILTER LIGHTS MENTHOL 100

Value entry product - test marketed in 13 states -
first 100 mm cigarette introduced using Doral name. 5/84

National distribution.

New package graphics. 7/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. Ventilation increased resulting in lower tar and CO deliveries and total RTD. 5/88

Ventilation decreased (40 to 32%) - resulted in higher total RTD (91 to 125 mm of H₂O), filter RTD (83 to 118 mm of H₂O) and CO delivery (11 to 13 mg). Lower nicotine delivery (0.8 to 0.7 mg) correlated with lower alkaloids (2.2 to 1.9%). 5/89

The level of expanded tobacco decreased (25 to 19%) resulting in a higher tobacco weight (0.696 to 0.738 g) and rod density (0.204 to 0.218 g/cc). 12/89

DORAL FULL FLAVOR 80 (BOX)

Test market - Louisiana - delivers 14 mg tar and 0.8 mg nicotine. 7/87

DORAL FULL FLAVOR 85

Test marketed in New Hampshire - delivers 17 mg tar and 1 mg nicotine - uses phosphate as paper component. 1/87

National distribution. 3/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. Ventilation (7%) was added. 5/88

DORAL FULL FLAVOR 100

Test marketed in New Hampshire - delivers 14 mg tar and 0.9 mg nicotine. 1/87

Nationally distributed. 3/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. 5/88

Tipping paper length decreased (36 to 35 mm). 5/89

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DORAL FULL FLAVOR MENTHOL 85

Distributed nationally - delivers 16 mg tar, 1.1 mg nicotine and 0.5 mg smoke menthol.

3/89

DORAL FULL FLAVOR MENTHOL 100

Distributed nationally - delivers 15 mg tar, 1.1 mg nicotine and 0.6 mg smoke menthol.

3/89

DORAL ULTRA LIGHTS 85

Introduced nationally - this value entry product delivers 5 mg tar and 0.4 mg nicotine.

5/89

DORAL ULTRA LIGHTS 100

Distributed nationally - delivers 7 mg tar and 0.4 mg nicotine - uses phosphate as the paper component.

3/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. Increased ventilation resulted in lower tar and CO deliveries and lower total RTD.

5/88

EMERA 100

100 mm slim cigarettes with 27 mm filter, plain - new type pack and carton.

9/69

Expanded tobacco (6%) noted in blend since August, 1969.

11/69

Tar (4 mg) and nicotine (0.2 mg) increased by changes in paper porosity (11 to 18 sec.) and fiber denier.

2/70

Discontinued by Reynolds in May, 1970.

5/70

EMERA MENTHOL 100

100 mm slim cigarettes with 27 mm filter, mentholated - new type pack and carton.

9/69

Expanded tobacco (6%) noted in blend since August, 1969.

11/69

Tar (4 mg) and nicotine (0.2 mg) increased by changes in paper porosity (11 to 18 sec.) and fiber denier.

2/70

Discontinued by Reynolds in May, 1970.

5/70

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JAMESTOWN 85

85 mm cigarette - similar to Winston 85 possibly for trademark purposes.

6/70

Discontinued.

MAGNA 80 (BOX)

Distributed in ten cities - generic price - delivers 12 mg tar and 0.8 mg nicotine.

3/87

MAGNA LIGHTS 80 (BOX)

Introduced nationally - this value entry product delivers 9 mg tar and 0.6 mg nicotine.

5/89

MAGNA 85

Distributed in ten cities - generic price - delivers 12 mg tar and 0.8 mg nicotine.

3/87

MAGNA LITES 85

Distributed in ten cities - generic price - delivers 9 mg tar and 0.6 mg nicotine.

3/87

Lower ventilation (22 to 17%) and a change in cigarette paper resulted in higher tar (10 to 11 mg) and nicotine (0.7 to 0.8 mg) deliveries. The cigarette paper is more porous and has a lower level of paper component. A lower total and filter RTD were noted.

11/89

MORE 120 (BOX)

Plain - Introduced - 120 mm cigarette with brown colored cigarette and tipping paper. This new cigarette is slimmer (21 mm circumference) and longer (119 mm) than any other cigarette on the market. Two versions introduced - 1 with 3 rows of parallel (mechanically) ventilation holes the length of the cigarette rod and 1 without ventilation holes.

9/74

Tar decrease (22 to 21 mg) by increase in filter ventilation (22 to 36%). A lower total RTD was observed.

9/79

Tar (20.5 to 18.5 mg), nicotine (1.64 to 1.52 mg) and CO (23.2 to 20.4 mg) reduced - lower filler rod TPM (38.1 to 35.1 mg).

1/81

Tar (17.3 to 15.8 mg), nicotine (1.46 to 1.23 mg) and CO (20.4 to 19.3 mg) lowered - increase in filter length (30 to 35 mm) and tipping paper length (35 to 39 mm).

5/81

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MORE 120 (BOX)

Tar (15 to 17.1 mg), nicotine (1.19 to 1.36 mg) and CO (21 to 22.8 mg) increased - decreased ventilation (37 to 28%).

11/82

Tobacco weight (0.771 to 0.735 g) and rod density (0.255 to 0.245 g/cc) decreased.

7/89

MORE MENTHOL 120 (BOX)

Menthol - Introduced - 120 mm cigarette with brown colored cigarette and tipping paper. This new cigarette is slimmer (21 mm circumference) and longer (119 mm) than any other cigarette on the market. Two versions introduced - one with 3 rows of parallel (mechanically) ventilation holes the length of the cigarette rod and one without ventilation holes.

9/74

Tar decrease (23 to 22 mg) by increase in filter ventilation (23 to 33%). A lower total RTD was observed.

9/79

Tar (21.2 to 18.8 mg), nicotine (1.75 to 1.53 mg) and CO (23.4 to 19.4 mg) reduced - lower filler rod TPM (38.1 to 35.1 mg).

1/81

Tar (18 to 16 mg), nicotine (1.5 to 1.3 mg) and CO (20 to 19 mg) lowered - increase filter length (30 to 35 mm) and tipping paper length (35 to 39 mm).

6/81

Tobacco weight (0.780 to 0.721 g) and rod density (0.259 to 0.239 g/cc) decreased.

7/89

MORE LIGHTS 100 (BOX)

Introduced - a beige colored slim cigarette - targeted for the female market - tar (8 mg) and nicotine (0.6 mg) - expanded tobacco (16%).

6/81

Color of cigarette paper changed to deep tan - design of package changed.

9/84

Tobacco weight (0.678 to 0.639 g) and rod density (0.246 to 0.232 g/cc) decreased.

7/89

MORE LIGHTS MENTHOL 100 (BOX)

Introduced - a beige colored slim cigarette - targeted for the female market - tar (8 mg) and nicotine (0.6 mg) - expanded tobacco (28%).

6/81

Filler menthol increased (2.6 to 3.4 mg) - smoke menthol increased (0.39 to 0.56 mm) - ventilation system changed from mechanical to Hauni laser perforation.

5/84

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MORE LIGHTS MENTHOL 100 (BOX) (r. t.)

Color of cigarette paper changed to deep tan - design of package changed. Decrease in expanded tobacco (28 to 17%) - increase in tobacco weight (0.603 to 0.684 g) - increase puff count (8.0 to 9.5).

9/84

Tobacco weight (0.678 to 0.638 g) and rod density (0.247 to 0.232 g/cc) decreased.

12/89

MORE LIGHTS 120

Test market - San Francisco and Los Angeles - delivers 12 mg tar and 0.9 mg nicotine - similar to More 120's.

7/87

MORE LIGHTS 120 MENTHOL

Test market - San Francisco and Los Angeles - delivers 12 mg tar, 0.9 mg nicotine and 0.5 mg smoke menthol - similar to More 120's.

7/87

MORE WHITE LIGHTS 120

Test marketed on East Coast - delivers 9 mg tar and 0.7 mg nicotine - uses white cigarette paper.

1/89

MORE WHITE LIGHTS MENTHOL 120

Test marketed on East Coast - delivers 11 mg tar, 0.7 mg nicotine and 0.5 mg smoke menthol - uses white cigarette paper.

1/89

MR. MENTHOL 85

85 mm mentholated cigarette with 20 mm CA filter. Single row of ventilation holes - Blend does not contain expanded tobacco.

2/70

Discontinued.

NOW 80 (BOX)

Introduced a low tar (0.2 mg) and nicotine (0.03 mg) cigarette. Ultra low delivery achieved by high filter ventilation (85%) and low tobacco weight (82% expanded tobacco).

4/80

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Now 85 (BOX)

Plain - test marketed in a flip-top box - Tar (2 mg) and nicotine (0.2 mg) deliveries - Accomplished primarily by high ventilation and blend composition - Blend contains 50% expanded tobacco and lowest filler weight of any 85 mm cigarette.

12/75

Test marketed in a crush-proof box - Tar (2 mg) and nicotine (0.2 mg) deliveries accomplished by high filter ventilation and blend composition - Blend contains 50% expanded tobacco and has a rod density of 0.17 g/cc.

1/76

Tar and nicotine data on pack changed to 1 mg and 0.1 mg, respectively. Lower tar achieved as result of increased filter ventilation.

12/76

Tar (1 mg) and nicotine (0.1 mg) data listed on pack replaced by statement "Ultra Low Tar." Increase in filler alkaloids noted.

11/77

Tar (2 to 0.6 mg), nicotine (0.2 to 0.06 mg) and CC (2 to <1.0 mg) lowered - increase filter ventilation (68 to 82%) and tipping paper (30 to 35 mm) - tar data on pack changed from 2 to 1 mg.

6/81

Filter length increased (25 to 27 mm) - filter RTD increased (6.1 to 6.5 in. H2O) - tobacco weight (0.524 to 0.505 g) and rod density (0.182 to 0.718 decreased) Ventilation system changed from mechanical to laser perforation.

3/83

Tipping paper length decreased (35 to 31 mm).

1/84

Discontinued - replaced by Now 85 (SP).

11/77

Now 85 (SOFT PACK)

Soft pack version marketed in Washington, D.C. Similar to hard box version of Now 85 cigarettes with the exception of a longer cigarette length. "Ultra Low Tar" specified on the package.

11/77

Tobacco weight (0.514 to 0.471 g) and rod density (0.181 to 0.167 g/cc) decreased.

7/89

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Now MENTHOL 85 (BOX)

Menthol - test marketed in a flip top box - Tar (2 mg) and nicotine (0.2 mg) deliveries - Accomplished primarily by high ventilation and blend composition - Blend contains 50% expanded tobacco and lowest filler weight of any 85 mm cigt. 12/75

Menthol - Test marketed in a crush-proof box - Tar (2 mg) and nicotine (0.2 mg) deliveries accomplished by a high filter ventilation and blend composition - Blend contains 50% expanded tobacco and has a rod density of 0.17 g/cc. 1/76

Tar and nicotine data on pack changed to 1 mg and 0.1 mg, respectively. Lower tar achieved as result of increased filter ventilation. 12/76

Tar (1 mg) and nicotine (0.1 mg) data listed on pack changed to 2 mg and 0.2 mg, respectively. Increase in filler alkaloids noted. 11/77

Tar (2 to 0.06 mg), nicotine (0.2 to 0.06 mg) and CO (2 to <1.0 mg) lowered - increase filter ventilation (68 to 82%) and tipping paper (30 to 35 mm) - tar data on pack changed from 2 to 1 mg. 6/81

Filter length increased (25 to 27 mm) - decreased tobacco weight (0.517 to 0.492 g). Ventilation system changed from mechanical perforation to laser perforation. 11/83

Tipping paper length decreased (35 to 31 mm). 1/84

Discontinued - replaced by Now Menthol 85 (SP). 11/77

Now MENTHOL 85 (SOFT PACK)

Soft pack version marketed in Washington, D.C. Similar to hard box version of Now Menthol 85 cigarettes with the exception of a longer cigarette length. "Ultra Low Tar" specified on the package. 11/77

Tobacco weight (0.487 to 0.468 g) and rod density (0.173 to 0.165 g/cc) decreased. 12/89

Now 100

Test marketed - Tar (2 mg) and nicotine (0.2 mg) - Low delivery achieved by 75% filter ventilation. 3/80

Expanded tobacco (25 to 50%) increased - reconstituted tobacco (22 to 15%) decreased - lower tobacco weight (0.805 to 0.664 g) and rod density (0.229 to 0.185 g/cc). 2/81

Ventilation system changed from three to two rows laser perforation. 5/83

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NOW 100 (cont.)

Lower puff count due to less porous paper (14 to 23 sec.) with high level of paper component (0.5 to 1.6%). Increased filter RTD (3.7 to 4.7 in. H2O) and filter efficiency (58 to 65%) due to change in fiber denier (3.5/Y to 2.6/Y).

11/83

Tar (2.8 to 3.6 mg), nicotine (0.28 to 0.34 mg) and CO (2.9 to 4.3 mg) increased - decrease in ventilation (74 to 66%) - filter length (27 to 31 mm), filter weight (0.18 to 0.20 g), increased - tobacco weight decreased (0.659 to 0.614 g).

5/84

Tar, nicotine and CO decreased as a result of higher ventilation.

11/87

Tobacco weight (0.621 to 0.576 g) and rod density (0.185 to 0.170 g/cc) decreased.

7/89

NOW 100 (BOX)

Introduced - slim cigarette (22.5 mm), tar (0.00 mg), filter ventilation (95%), and filter RTD (9.5) - blend 100% expanded tobacco.

3/81

NOW MENTHOL 100

Test marketed - Tar (2 mg) and nicotine (0.2 mg) - Low delivery achieved by 75% filter ventilation.

3/80

Expanded tobacco (25 to 50%) increased - reconstituted tobacco (22 to 15%) decreased - lower tobacco weight (0.796 to 0.656 g) and rod density (0.229 to 0.185 g/cc).

2/81

Tar (2.8 to 1.4 mg) and nicotine (0.25 to 0.20 mg) decreased - ventilation (76 to 82%) increased - menthol (0.34 to 0.29 mg) decreased.

5/82

Tar (1.5 to 2.3 mg), nicotine (0.21 to 0.30 mg) and CO (3.9 to 1.8 mg) increased - decreased ventilation (82 to 76%).

9/82

Ventilation system changed from three to two rows laser perforation.

5/83

CO increased (1.6 to 2.5 mg) due to a change to a less porous paper (15 to 25 sec.) with higher level of paper component (0.4 to 1.9%) - Fiber denier decreased (3.2/Y to 2.4/Y) resulting in increased filter RTD (3.8 to 4.6 in. H2O) and filter efficiency (54 to 64%).

1/84

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NEW MENTHOL 100 (cont.)

Tar (2.5 to 3.4 mg) and CO (2.9 to 3.6 mg) deliveries increased - decreased ventilation (77 to 71%). Filter length increased (27 to 31 mm) - decreased tobacco weight (0.662 to 0.620 g), increased total RTD (3.4 to 4.1 in. H2O) filter RTD (4.6 to 5.4 in. H2O) and filter weight (0.19 to 0.21 g).

5/84

Tobacco weight (0.584 to 0.572 g) and rod density (0.173 to 0.168 g/cc) decreased.

12/89

PRINCE ALBERT 85

Introduced - king size with a 20 mm CA filter - "pipe tobacco" blend.

8/65

Discontinued.

REAL 85

Introduced - low tar (10 mg) and nicotine (0.8 mg) correlating with a 25 mm high efficiency CA filter with ventilation (27%). Blend contains similar levels of reconstituted material and Freon expanded tobacco typical of other Reynolds' products. Tar (9 mg) listed on pack along with a claim "Nothing Artificial Added."

6/77

Lower tar (10 to 8 mg) and nicotine (0.9 to 0.7 mg) resulting from an increase in filter ventilation (25 to 38%).

5/80

Discontinued.

REAL MENTHOL 85

Introduced - low tar (10 mg) and nicotine (0.8 mg) correlating with a 25 mm high efficiency CA filter with ventilation (34%). Blend contains similar levels of reconstituted material and Freon expanded tobacco typical of other Reynolds' products. Tar (9 mg) listed on pack along with a claim "Nothing Artificial Added."

6/77

Filler and smoke menthol levels increased.

2/79

Discontinued.

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RITZ 100 (BOX)

Introduced - flip-top box has Yves Saint Laurent designer logo - cigarettes will be sold at a premium price - delivers 11 mg tar and 0.8 mg nicotine - typical Reynolds blend.

1/85

National distribution.

4/86

Tobacco weight (0.758 to 0.694 g) and rod density (0.244 to 0.222 g/cc) decreased.

12/89

RITZ MENTHOL 100 (BOX)

Introduced - flip-top box has Yves Saint Laurent designer logo - cigarettes will be sold at a premium price - delivers 11 mg tar, 0.8 mg nicotine and 0.7 mg menthol.

1/85

National distribution.

4/86

Tobacco weight (0.772 to 0.734 g) and rod density (0.248 to 0.234 g/cc) decreased.

12/89

SALEM 80 (BOX)

Introduced in flip-top box - Similar to Salem 85.

3/74

Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.

11/75

Tipping paper length increased (23 to 24 mm). Decrease in tar delivery and puff count noted.

11/76

Decrease in tar (19 to 15 mg) and nicotine (1.2 to 1.1 mg) deliveries corresponding to the use of a more porous cigarette paper and a more efficient filter.

7/77

Reintroduced in test market - uses cork tipping paper - delivers 16 mg tar, 1.1 mg nicotine, and 0.5 mg smoke menthol.

9/85

Discontinued.

8/86

SALEM 85

Nicotine delivery and filler alkaloids decreased.

10/60

Nicotine delivery and filler alkaloids decreased.

7/63

Nicotine delivery and filler alkaloids increased.

7/64

Nicotine delivery and filler alkaloids increased.

2/65

TPM decreased 1.5 mg by changing paper additive.

3/65

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SALEM 85 (cont.)

Filter length increased, 17 to 20 mm.	10/66
Expanded tobacco (4%) noted in blend of some cigarettes.	11/69
Tar (1 mg) and tobacco weight decreased by addition of expanded tobacco.	3/70
Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased - No change in smoke deliveries.	2/73
Tar delivery (1 mg) decreased - Cigarette length decreased - puff count lower.	3/73
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Cigarette length (84.3 to 84.0 mm) decreased.	2/76
Decrease in tar (18 to 16 mg) and nicotine (1.2 to 1.0 mg) correlating with a change to a more porous cigarette paper.	5/77
Tar (13.7 to 15.2 mg), nicotine (1.04 to 1.19 mg) and CO (13.6 to 15.4 mg) increased - change to a less porous paper (18 to 20 sec.) and a less efficient filter (45 to 40%) - higher filler menthol (1.4 to 2.1 mg) resulted in higher menthol in smoke (0.42 to 0.55 mg). Tobacco wt. (0.783 to 0.745 g) and rod density (0.252 to 0.242 g/cc) decreased - increased paper component (0.6 to 1.3 %).	8/82
Test marketed pack containing 12 cigarettes per pack.	3/83
Ventilation decreased (18% to none) resulting in higher tar (15 to 16 mg), nicotine (1.2 to 1.3 mg), CO (16 to 18 mg), and menthol (0.57 to 0.68 mg) deliveries.	5/83
Paper component level increased (0.6 to 1.5%).	11/83
New package graphics test marketed.	11/87
Tobacco weight (0.737 to 0.700 g) and rod density (0.235 to 0.224 g/cc) decreased.	7/89

SALEM EXTRA 85

Introduced - Delivers more menthol than current Salem 85 - cork tipping.	10/74
Discontinued.	

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SALEM LIGHTS 85

Menthol - Test marketed - Tar (12 mg) and nicotine (0.8 mg) deliveries - Lower in tar than Salem 85 because of more porous cigarette paper, filter ventilation and an increased filter and tipping paper length. 11/75

Tar delivery (1 mg) decreased by increase in filter ventilation. 4/76

Tar (10 to 8 mg), nicotine (0.8 to 0.6 mg), and CO (13 to 12 mg) decreased resulting from an increase in both filter ventilation (16 to 28%) and tipping paper length (30 to 32 mm). 10/80

Tar (8.6 to 8.2 mg) and CO (10.7 to 8.8 mg) decreased - increased filter ventilation (30 to 42%). Paper porosity decreased (17 to 26 sec.) - paper component increased (0.7 to 1.6%). Tobacco weight (0.714 to 0.689 g) decreased - increased amount of expanded tobacco. (13 to 17%). 10/82

Test marketed pack containing 12 cigarettes per pack. 3/83

Tar (8 to 9 mg), nicotine (0.7 to 0.8 mg), CO (9 to 11 mg), and menthol (0.31 to 0.50 mg) deliveries increased due to decreased ventilation. Ventilation system changed from two to one row of mechanical perforation - decreased paper component - increased cigarette paper porosity. 5/83

Filter length increased (25 to 27 mm), rod density increased (0.237 to 0.244 g/cc). 9/83

Tar (9 to 10 mg), nicotine (0.77 to 0.82 mg) and puff count (7.4 to 7.8) increased - tipping paper length decreased (32 to 31 mm) - filler menthol (2.6 to 2.9 mg) and smoke menthol (0.48 to 0.52 mg) increased. 3/84

New package graphics teste marketed. 11/87

Tobacco weight (0.664 to 0.636 g) and rod density (0.234 to 0.224 g/cc) decreased. 7/89

SALEM ULTRA LIGHTS 85

Name changed to Salem Ultra Lights. 3/82

Tar (4.8 to 3.5 mg), nicotine (0.42 to 0.47 mg) and CO (4.7 to 6.7 mg) increased - decreased ventilation (56 to 52%) and less porous paper (18 to 26 sec.) - increased paper component (0.8 to 1.7%). Filter efficiency (58 to 63%) increased - increased filter RTD (99 to 130 mm of H2O) - Menthol in smoke (0.50 to 0.42 mg) decreased - lower menthol in filler and filter. 12/82

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SALEM ULTRA LIGHTS 85 (cont.)

Filter (25 to 27 mm) and tipping paper (30 to 31 mm) lengths increased. Ventilation system changed from mechanical to Hauni laser. 11/83

New package graphics test marketed. 11/87

SALEM 100

Test marketed - 100 mm long - 20 mm CA filter. 6/67

Tar (4 mg) and nicotine (0.2 mg) reduced by filter length (20 to 25 mm) and tipping paper (24 to 30 mm). 12/67

Tar (2 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (6%) - Tobacco weight lower. 10/70

Reconstituted tobacco content of blend increased (22 to 26%). 4/71

Filter length (25 to 27 mm) and tipping paper length (30 to 31 mm) increased - No change in smoke deliveries. 1/73

Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery. 11/75

Name changed from Salem Premium Length 100 to Salem 100. 5/77

Cigarette length increased corresponding to 0.4 mm increase in filter length. 11/77

Tar (15.3 to 13.9 mg) and CO (16.4 to 13.8 mg) decreased - increase in filter ventilation (17 to 28%). 1/81

Tar (14.6 to 17.0 mg), nicotine (1.17 to 1.27 mg) and CO (14.3 to 16.7 mg) increased - change to less porous paper (16 to 24 sec.) and decreased ventilation (25 to 19%). Menthol in smoke (0.43 to 0.69 mg) increased - higher menthol levels in filler and filter. 10/82

Test marketed pack with 12 cigarettes per pack. 3/83

CO decreased (16 to 14 mg) - change to more porous paper (25 to 17 sec.) with lower level of paper component (1.5 to 0.7%). 5/84

Change to a less porous cigarette paper (14 to 20 sec.) and increased level of paper component (0.8 to 1.6%) - longer tipping paper (31 to 32 mm). 11/85

New package graphics test marketed. 11/87

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SALEM 100 (cont.)

Increased tar delivery correlated with lower level of paper component.

1/88

Tobacco weight (0.859 to 0.829 g) and rod density (0.241 to 0.232 g/cc) decreased.

7/89

SALEM LIGHTS 100

Introduced - appears to be low delivery (11 mg tar and 0.8 mg nicotine) version of Salem 100 cigarettes. Low delivery achieved by filter ventilation.

10/76

Name changed from Salem Long Lights 100 to Salem Light 100.

5/77

Cigarette length increased corresponding to 0.4 mm increase in filter length.

11/77

Tar (10.3 to 9.8 mg) reduced - lower filter ventilation (33 to 29%) - increase in tipping paper length (31 to 35 mm).

2/81

Filter length increased (27 to 31 mm) - tobacco weight decreased (0.852 to 0.811 g).

6/84

Filter length increased (27 to 31 mm), tobacco weight decreased (0.847 to 0.803 g), smoke menthol lower (0.53 to 0.45 mg) correlated with lower filler menthol content (3.6 to 2.9 mg).

7/84

New package graphics test marketed.

11/87

Tobacco weight (0.774 to 0.750 g) and rod density (0.230 to 0.223 g/cc) decreased.

7/89

SALEM LIGHTS 100 "CUSTOM CASE"

Test marketed in an eight sided package in Richmond, Fort Wayne, Milwaukee and Houston. Higher smoke deliveries on this new brand - a result of lower ventilation and a less efficient filter - smaller circumference, lower tobacco weight and shorter cigarette length were also noted.

3/87

SALEM SLIM LIGHTS 100 (BOX)

Introduced - nationally - delivers 7.6 mg tar and 0.61 mg nicotine. The cigarette circumference is 22.7 mm.

12/81

Tar data changed on pack (9 to 8 mg) to comply with FTC Report.

6/82

New package graphics test marketed.

11/87

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SALEM ULTRA 100

Name change to Salem Ultra Lights 100.

3/82

SALEM ULTRA LIGHTS 100

Tar (4.6 to 6.0 mg), nicotine (0.46 to 0.54 mg) and CO (6.0 to 7.9 mg) increased - change to a less porous paper (17 to 24 sec.) - increased paper component (0.8 to 1.5%). Tobacco weight (0.829 to 0.840 g) and rod density (0.236 to 0.241 g/cc) increased - decreased amount of expanded tobacco (28 to 16%) - Menthol in smoke (0.37 to 0.47 mg) increased - total and filter RTD increased.

12/82

Tar (5.3 to 6.1 mg) and CO (6.2 to 7.2 mg) increased - decreased ventilation (60 to 56%). Increased filter length (27 to 31 mm) and filter weight (0.20 to 0.22 g) - decreased tobacco weight (0.831 to 0.789 g). Ventilation system changed from mechanical to Hauni laser.

5/84

New package graphics test marketed.

11/87

Tobacco weight (0.789 to 0.769 g) and rod density (0.234 to 0.228 g/cc) decreased.

12/89

STERLING SPECIAL BLEND 85 (SOFT PACK)

Introduced in black soft pack - similar in design to Sterling Special Blend (Box) - delivers 9 mg tar and 0.6 mg nicotine.

5/85

Discontinued.

1/87

STERLING SPECIAL BLEND 94 (BOX)

National distribution - delivers 12 mg tar and 0.9 mg nicotine - packed in black pack - 94 mm cigarette length.

1/84

Discontinued.

1/87

STERLING SPECIAL BLEND MENTHOL 94 (BOX)

National distribution - delivers 12 mg tar and 0.9 mg nicotine - packed in black pack - 94 mm cigarette length.

1/84

Discontinued.

1/87

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TEMPO 85

Test marketed - dual carbon filter king size soft pack - fused carbon inner plug - high gas phase activity.	4/64
Polyethylene pellets added to charcoal filter - decrease in gas phase activity - blend change indicated by an increase in filler alkaloids and decrease in reducing sugars.	1/65
Nicotine delivery and filler alkaloids increased.	4/65
Gas phase activity of filter decreased.	2/66
TPM (5 mg) and nicotine (0.5 mg) decreased as result of changes in blend, cigarette paper, and filter.	12/66
Reconstituted tobacco content increased (17 to 23%).	3/67
Tar (4 mg) and nicotine (0.2 mg) reduced by change in filter length (20 to 25 mm) and in tipping paper (24 to 30 mm).	5/68
Tar (2 mg) reduced as a result of introduction of Hauni-type ventilation (27%) - A higher gas phase smoke index and lower total and filter RTD were noted.	10/68
Tar (2 mg) and nicotine (0.1 mg) increased by reduction in the amount of filter ventilation.	7/69
Tar (1 mg) and nicotine (0.1 mg) reduced by an increase in filter ventilation - Reduction in total and filter RTD was noted.	7/70
Package overwrap changed from cellophane to polypropylene.	8/70
Expanded tobacco observed in blend (3%) - Paper porosity changed (12 to 8 seconds) - Tar increased (1 mg).	10/71
Expanded tobacco increased (4 to 8%). Lower tobacco weight and rod density noted - Cigarette paper porosity changed (17 to 12 seconds).	3/72
Tar (5 mg) and nicotine (0.3 mg) reduced by increased filter efficiency and filter ventilation - Fiber denier of outer filter changed from 3.2 to 1.9 - Expanded tobacco increased from 7 to 11%.	2/76
Discontinued.	

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VANTAGE 85

A new low tar (11 mg) and nicotine (0.9 mg) cigarette with a new 25 mm geometrically shaped cellulose acetate filter - High alkaloids content and blend contains 8% expanded tobacco - Tar (11 mg) and nicotine (0.9 mg) listed on pack. 7/70

Filter shape of cigarettes modified and is similar to that of Vantage 100. A 25% reduction in filter weight resulted from this change in filter shape. 3/79

Incorporation of filter ventilation (19%) resulted in lower tar (10 to 9 mg) and nicotine (0.9 to 0.8 mg) deliveries. 5/79

Tar (9 to 10 mg) increased resulting from the elimination of filter ventilation. Vantage 85 cigarettes manufactured during April, May and June, 1979, had filter ventilation. 8/79

Incorporation of filter ventilation (16%) resulted in lower tar (10 to 9 mg). 3/80

Test marketed pack containing 12 cigarettes per pack. 3/83

Test marketed new package design in Washington State and Oklahoma. The "bulls-eye" was replaced by a band of red, gold and blue stripes. 3/86

New package design in national distribution. 11/86

Tar, nicotine and CO deliveries increased as a result of lower ventilation. 9/87

Ventilation increased (10 to 28%) resulting in lower tar (10 to 8 mg) and CO (13 to 12 mg) deliveries and a lower total RTD (146 to 136 mm of H₂O). Lower nicotine delivery (0.7 to 0.6 mg) correlated with lower total alkaloids (2.0 to 1.8%) - type of perforation changed from ESP to Maui Laser. 5/89

Increased level of expanded tobacco (16 to 20%) resulted in a lower tobacco weight (0.677 to 0.657 g) and rod density (0.238 to 0.224 g/cc). 7/89

VANTAGE MENTHOL 85

Similar to the Vantage plain except for menthol. 4/71

Filter design changed to circular openings at each end and constricted in the middle. 10/73

Menthol in smoke delivery decreased resulting from lower filler menthol content. 7/74

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VANTAGE MENTHOL 85 (cont.)

Tar (9.8 to 8.6 mg), nicotine (0.77 to 0.69 mg) and CO (15.2 to 12.6 mg) lowered - introduction of filter ventilation (14%) with one row of MP holes. Tar data listed on pack changed (11 mg to 9 mg).

2/81

Tar (9.4 to 7.9 mg) and CO (12.2 to 8.8 mg) deliveries decreased resulting from increased ventilation (16 to 40%) fiber denier and shape (1.8/R to 3.3/Y) changed - correlated with lower filtration efficiency (63 to 54%) - a less porous cigarette paper (16 to 20 sec.) with increased paper component (0.9 to 1.4%) was noted.

1/85

Package with multicolored stripes replaces "bull's-eye" package.

11/86

Filter changed to a tow-in-tow filter - higher smoke deliveries correlated with this change - higher smoke menthol delivery correlated with increased filter menthol.

1/87

Tobacco weight (0.714 to 0.684 g) and rod density (0.244 to 0.232 g/cc) decreased.

12/89

VANTAGE 100

Low tar (11 mg) and nicotine (0.8 mg) cigarette characterized by a high efficiency filter containing 18% ventilation. A modified version of the Filtrona filter used on Vantage 85 cigarettes. Tar (11 mg) and nicotine (0.9 mg) listed on pack.

1/77

Name changed from Vantage Long 100 to Vantage 100.

4/77

Cigarette length increased corresponding to 0.4 mm increase in filter.

11/77

Tar (10.0 to 7.5 mg), nicotine (0.80 to 0.67 mg) and CO (15.1 to 11.9 mg) lowered - increase in filter ventilation (18 to 30%). Tar data listed on pack changed (12 to 9 mg).

2/81

Increase in tar (7.6 to 9.0 mg) and CO (11.7 to 13.0 mg) as result of a change in paper porosity (13 to 17 sec.).

8/81

Total and filter RTD increased and filter efficiency decreased due to change in fiber denier and shape (1.7/R to 2.6/Y).

5/83

Test marketed new package design in Washington State and Oklahoma. The "bulls-eye" was replaced by red, blue and gold bands.

3/86

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VANTAGE 100 (cont.)

New package design in national distribution. 11/86

Tobacco weight (0.825 to 0.781 g) and rod density (0.231 to 0.219 g/cc) lowered - no changes in smoke deliveries. 3/89

VANTAGE EXCEL 100

Test marketed in Michigan, Arkansas and Louisiana - cigarette paper uses magnesium hydroxide - the blend contains 77% expanded tobacco - advertising claims there is "less lit end smoke" - cigarette delivers 9 mg tar and 0.7 mg nicotine. 1/89

Discontinued 12/89

VANTAGE MENTHOL 100

Introduced - Tar (10 mg) and nicotine (0.8 mg) - filter configuration different from Vantage 100 resulting in higher total and filter RTD. 10/82

Filter length increased (27 to 31 mm) - tobacco weight decreased (0.839 to 0.792 g). Tipping paper length increased (34 to 35 mm). Lower nicotine (0.82 to 0.66 mg) and lower total alkaloid (1.95 to 1.78%) content observed. Ventilation system changed from mechanical to Hauni laser perforation. 9/84

Package with multicolored stripes replaced "bull's-eye" package. 11/86

Filter changed to a tow-in-tow filter - higher smoke deliveries correlated with this change - higher smoke menthol delivery correlated with increased filler menthol. 3/87

Tobacco weight (0.802 to 0.754 g) and rod density (0.237 to 0.224 g/cc) decreased. 7/89

VANTAGE ULTRA LIGHTS 85

Test marketed - New cigarette delivers 6 mg tar and 0.7 mg nicotine. 25 mm CA filter and 32% filter ventilation. This new Vantage Ultra Lights 85 cigarette has a higher filler alkaloid content than the regular Vantage 85 cigarettes. 6/79

Filter changed to CA - expanded tobacco (28 to 17%), tobacco weight (0.630 to 0.697 g), filter ventilation (35 to 55%), tar (6.3 to 5.1 mg) and CO (9.4 to 5.5 mg) decreased. 5/81

CO (5.0 to 6.8 mg) increased - change to less porous paper (16 to 26 sec.) - Increased paper component, puff count decreased. Tobacco weight (0.698 to 0.616 g) decreased - amount of expanded tobacco (17 to 20%) increased. 7/82

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VANTAGE ULTRA LIGHTS 85 (cont.)

Filter length increased (25 to 26 mm).	10/82
Test marketed Filtrona-type filter.	5/83
Filter (26 to 27 mm) and tipping paper (30 to 31 mm) lengths increased - Ventilation system changed from mechanical to Mauni laser perforation.	11/83
Package with multicolored stripes replaces "bull's eye" package.	11/86
Tobacco weight (0.610 to 0.592 g) and rod density (0.215 to 0.208 g/cc) decreased.	12/89

VANTAGE ULTRA LIGHTS MENTHOL 85

National distribution - tar (5 mg) - similar to Vantage Ultra Lights 85 already on the market.	7/82
Test marketed Filtrona-type filter.	5/83
Filter (25 to 27 mm) and tipping paper (30 to 31 mm) lengths increased - ventilation system changed from mechanical to Mauni laser.	11/83
Discontinued.	9/86

VANTAGE ULTRA LIGHTS 100

Introduced - Tar (5 mg) and nicotine (0.5 mg) - Low delivery achieved by a filter ventilation of 47% - Blend contains 19% expanded tobacco.	10/79
Paper component in the cigarette paper decreased - higher puff count (8.6 to 9.2).	4/81
Filter changed to CA - expanded tobacco (28 to 17%), tobacco weight (0.791 to 0.836 g), filter ventilation (45 to 58%) increase - tar (5.2 to 5.6 mg) and CO (7.9 to 5.8 mg).	5/81
Tobacco weight (0.847 to 0.751 g) decreased - increased amount of expanded tobacco (17 to 20%). Lower filler rod TPM (29.0 to 26.2 mg) and puff count (10.7 to 9.0 mg) observed. Cigarette length shortened (99.4 to 99.0 mm).	7/82
CO (5.6 to 6.3 mg) increased - change to a less porous paper (17 to 24 sec.) - Increased paper component (0.8 to 1.3%).	8/82

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VANTAGE ULTRA LIGHTS 100 (cont.)

Test marketed Filtrona-type filter. 5/83

CO (6.4 to 5.6 mg) decreased - change to a more porous paper (24 to 16 sec.) with lower level of paper component (1.6 to 0.9%). 1/84

CO (5.7 to 7.2 mg) increased - change to a less porous paper (16 to 26 sec.) - Filter weight (0.20 to 0.22 g), filter length (27 to 31 mm) and tipping paper length (34 to 35 mm) increased - tobacco weight decreased (0.770 to 0.714 g). 5/84

Package with multicolored stripes replaces "bull's eye" package. 11/86

Tobacco weight (0.729 to 0.709 g) and rod density (0.216 to 0.209 g/cc) decreased. 12/89

VANTAGE ULTRA LIGHTS MENTHOL 100

National distribution - Tar (5 mg) similar to Vantage Ultra Lights 100 already on the market. 7/82

Test marketed Filtrona-type filter. 5/83

CO (6.9 to 6.0 mg) decreased due to more porous cigarette paper (24 to 16 sec.) with less paper component (1.1 to 0.8%). 11/83

Filter length increased (27 to 31 mm) - tobacco weight decreased (0.727 to 0.665 g). Tipping paper length increased (34 to 35 mm) - larger fiber denier (2.5 to 3.0) correlated with higher filter RTD (135 to 155 mm H2O). 9/84

Blend change noted - changes in total alkaloids, total reducing sugars, filler rod TPM, reconstituted tobacco, and expanded tobacco resulted - correlated with higher tobacco weight and rod density - less porous cigarette paper with an increased level of paper component and a higher puff count were observed - no changes in smoke deliveries. 9/86

Discontinued. 9/86

WINCHESTER 85

Plain - Introduced - Tar (18 mg) and nicotine (1.3 mg) No unusual characteristics. 10/74

Discontinued.

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WINCHESTER MENTHOL 85

Menthol - Introduced - Tar (18 mg) and nicotine (1.3 mg) -
No unusual characteristics.

10/74

Discontinued.

WINSTON 80 (BOX)

Nicotine delivery and filler alkaloids decreased.

9/60

Nicotine delivery and total alkaloids decreased.
Reducing sugars increased.

6/61

Lighter filter of same efficiency.

11/61

Alkaloids reduced by 0.2%.

12/62

Total alkaloids reduced.

5/63

Nicotine delivery and filler alkaloids increased.

2/65

Tar (2 mg) and nicotine (0.1 mg) decreased by addition of
expanded tobacco (8%) - Tobacco weight lower.

3/70

The amount of expanded tobacco increased (8 to 10%).
A lower tobacco weight and rod density were observed.

2/71

Filter length (17 to 19 mm) and tipping paper length
(21 to 23 mm) increased - Tar (1 mg) and nicotine
(0.1 mg) decreased.

3/73

Lower filler alkaloids (0.1%).

11/75

Tipping paper length increased (23 to 24 mm). Decrease
in tar delivery (19 to 18 mg).

10/76

Tar (18 to 16 mg) and nicotine (1.3 to 1.1 mg) decreased
by a change to a more porous paper and a more efficient
filter.

1/80

New package graphics.

11/88

Tobacco weight (0.736 to 0.698 g) and rod density (0.249
to 0.236 g/cc) decreased.

7/89

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WINSTON 85

Nicotine delivery and filler alkaloids decreased.	9/60
Lighter filter of same efficiency.	11/61
TPM and nicotine reduction (1.5 mg and 0.2 mg) - Total alkaloids reduced.	4/63
Nicotine delivery and filler alkaloids increased.	2/65
Filter length increased, 17 to 20 mm - No change in smoke deliveries.	8/66
Expanded tobacco (6%) noted in blend of some cigarettes.	11/69
Tar (1.5 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (7%). Tobacco weight lower.	3/70
The amount of expanded tobacco increased (7 to 10%). A lower tobacco weight was noted.	3/71
Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased. These changes increased filter efficiency and tar delivery decreased 1 mg.	12/72
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Cigarette length (84.7 to 84.0 mm) decreased.	2/76
Tar (19 to 16 mg) and nicotine (1.4 to 1.0 mg) decreased as result of a change to a more porous paper and a more efficient filter.	2/80
Tar (14.8 to 14.0 mg) - filter ventilation by band of E.S.P. holes.	5/81
Test marketed pack containing 12 cigarettes per pack.	3/83
Tar (14.5 to 16.0 mg) and nicotine (1.1 to 1.2 mg) increased due to increased filler rod TPM (30.2 to 33.4), fiber denier (2.6/Y to 3.6/Y) and decreased paper component (1.6 to 0.4%).	7/83
New package graphics.	11/88
Tobacco weight lowered (0.751 to 0.714 g) - this resulted in lower total RTD (128 to 118 mm of H ₂ O), puff count (8.7 to 8.1) and ventilation level (9 to 6%) - higher total alkaloid level (1.9 to 2.0%) was observed - no changes were noted in smoke deliveries.	1/89

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WINSTON LIGHTS 80 (BOX)

Nationally introduced - blend contains two different types of reconstituted material - delivers 10 mg tar and 0.6 mg nicotine. 11/85

New package graphics. 11/88

Tobacco weight (0.682 to 0.657 g) and rod density (0.229 to 0.221 g/cc) decreased. 7/89

WINSTON LIGHTS 85

Introduced - 14 mg tar and 1.1 mg nicotine - 25 mm filter and ventilated - Blend contains 14% expanded tobacco. 7/74

Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery. 11/75

Tar (12 to 10 mg), nicotine (0.9 to 0.8 mg), and CO (13 to 10 mg) deliveries were lowered as result of an increase in filter ventilation (16 to 25%). Filter ventilation increased by increasing number of ventilation holes from one row to two rows of mechanically perforated holes. 12/80

The tipping paper was changed from white to cork. The word "lights" on the tipping paper was removed and only the name Winston now appears on the cigarette. 12/81

Tar (9.4 to 8.4 mg) and CO (11.2 to 10.0 mg) decreased - increased ventilation (26 to 36%). Lower tobacco weight (0.736 to 0.715 g) and rod density (0.254 to 0.248 g/cc) observed. 9/82

Filter length increased (25 to 26 mm). 10/82

Test marketed pack containing 12 cigarettes per pack. 3/83

Filter (26 to 27 mm) and tipping paper (30 to 31 mm) lengths increased - rod density increased (0.244 to 0.249 g/cc) - Ventilation system changed from one row laser to one row mechanical perforation. Total and filter RTD increased. 9/83

Tar (9 to 11 mg), nicotine (0.7 to 0.9 mg) and CO (9 to 11 mg) increased - decreased ventilation (32 to 24%). Less porous paper (17 to 24 sec.) - ventilation changed from mechanical to electrostatic perforation. 1/84

Test marketed in Cleveland, Ohio with white tipping paper. No differences were observed in smoke deliveries. 3/88

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WINSTON LIGHTS 85 (cont.)

Lower tar (10 to 9 mg), nicotine (0.7 to 0.6 mg) and CO (12 to 11 mg) deliveries resulted from a change to a more porous paper (19 to 15 seconds) - lower total RTD was observed. Ventilation type changed from electrostatic to laser perforation.

7/88

New package graphics.

11/88

Tobacco weight (0.682 to 0.657 g) and rod density (0.229 to 0.221 g/cc) decreased.

7/89

WINSTON ULTRA 85

Test marketed - ultra low tar (3 mg) with a 25 mm CA filter and 60% filter ventilation - blend contains 25% expanded tobacco.

10/80

Tar (3.4 to 4.6 mg), nicotine (0.39 to 0.46 mg), and CO (4.0 to 5.5 mg) increased - lower filter ventilation (59 to 55%) - lower filter RTD (4.5 to 3.8), tobacco weight (0.645 to 0.609 mg) and rod density (0.222 to 0.209 g/cc) - increase in expanded tobacco (23 to 34%).

2/81

Name changed to Winston Ultra Lights 85.

12/81

WINSTON ULTRA LIGHTS 85

Name changed from Winston Ultra 85. The tipping paper was changed from white to cork.

12/81

Tar (4.9 to 5.4 mg) and CO (4.4 to 6.3 mg) increased. A higher total and filter RTD were observed. Ventilation system changed from 2 to 1 row of mechanical perforation, lower ventilation noted (51 to 44%).

5/82

Tobacco weight (0.594 to 0.638 g) and rod density (0.206 to 0.220 g/cc) increased - decreased amount of expanded tobacco (30 to 20%).

8/82

Filter length increased (25 to 26 mm) - CO delivery increased (6.0 to 7.6 mg) due to change to less porous paper (17 to 23 sec.) - paper component increased (0.8 to 1.6%).

3/83

Filter length (26 to 27 mm) increased rod density decreased (0.216 to 0.211 g/cc).

9/83

Tipping paper length decreased (32 to 31 mm).

1/84

New package graphics.

11/88

Tobacco weight (0.601 to 0.573 g) and rod density (0.212 to 0.203 g/cc) decreased.

12/89

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WINSTON 100

Test marketed - 100 mm long - 20 mm CA filter.	1/67
Tar (6 mg) and nicotine (0.3 mg) reduced by increase in filter length (20 to 25 mm) and tipping paper (24 to 30 mm).	12/67
Tar (1 mg) and nicotine (0.1 mg) increased by a blend change.	4/68
Expanded tobacco (6%) noted in blend of some cigarettes.	12/69
Tar (1 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (7%) - Tobacco weight lower.	3/70
The amount of expanded tobacco increased (7 to 11%). A lower tobacco weight and rod density were noted.	3/71
Filter length (25 to 27 mm) and tipping paper length (30 to 31 mm) increased. Lower tar (1 mg) and nicotine (0.1 mg) observed.	9/73
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Cigarette length (99.4 to 99.0 mm) decreased.	2/76
Cigarette length increased corresponding to 0.4 mm increase in filter length.	11/77
Pack color changed from gold to red.	1/82
Tar (14.1 to 16.4 mg), nicotine (1.02 to 1.25 mg) and CO (15.8 to 16.6 mg) increased - change to a less porous paper (17 to 25 sec.). Increased paper component (0.8 to 1.2%).	9/82
Test marketed pack containing 12 cigarettes per pack.	3/83
Tipping paper length increased (31 to 32 mm) - no changes in smoke deliveries.	7/84
Tar increased (16.0 to 17.4 mg) - ventilation decreased (17 to 10%) - lower nicotine (1.22 to 1.13 mg) and alkaloids (1.94 to 1.57%) - lower paper component (1.4 to 0.4%).	3/85
New package graphics.	11/88
Tobacco weight (0.879 to 0.781 g) and rod density (0.238 to 0.232 g/cc) decreased.	7/89

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WINSTON LIGHTS 100

Introduced - 14 mg tar and 1.1 mg nicotine - High efficiency 27 mm CA filter with 15% ventilation - cork tipping paper. 3/77

Cigarette length increased corresponding to 0.4 mm increase in filter length. 11/77

Lower tar (13 to 12 mg) correlating with a more efficient filter. 5/79

Test marketed pack containing 12 cigarettes per pack. 3/83

Tar (12.1 to 11.1 mg) and nicotine (0.94 to 0.86 mg) decreased - increase in filter length (27 to 31 mm), filter weight (0.16 to 0.19 mg), and tipping paper length (34 to 35 mm). 5/84

Lower CO delivery (15 to 12 mg) correlated with increased ventilation (17 to 30%) and decreased efficiency (61 to 56%) - lower total RTD and filter RTD were noted. 5/85

Test marketed in San Francisco - has a 24 mm circumference and a 98 mm cigarette length - delivers 10 mg tar and 0.7 mg nicotine. 9/86

National distribution. 10/86

Test marketed in Cleveland, Ohio with white tipping paper. No differences were observed in smoke deliveries. 3/88

New package graphics. 11/88

Tobacco weight (0.807 to 0.781 g) and rod density (0.238 to 0.232 g/cc) lowered - no changes were noted in smoke deliveries. 3/89

WINSTON ULTRA 100

Test marketed - ultra low delivery (4 mg) - 28 mm CA filter with 52% filter ventilation - blend contains 25% expanded tobacco. 10/80

Name changed to Winston Ultra Lights 100. 12/81

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WINSTON ULTRA LIGHTS 100

Name changed from Winston Ultra 100. The tipping paper was changed from white to cork. 12/81

Expanded tobacco amount decreased (29 to 21%) - increased filter weight (0.18 to 0.20 g) resulted in increased filter RTD (124 to 140 mm H2O). 9/82

Filter length (27 to 31 mm), filter weight (0.20 to 0.22 g) and tipping paper length increased (34 to 35 mm) - tobacco weight decreased (0.770 to 0.723 g). 5/84

New package graphics. 11/88

Tobacco weight (0.724 to 0.698 g) and rod density (0.214 to 0.207 g/cc) decreased. 12/89

WINSTON MENTHOL 100

Test marketed - 100 mm long - 20 mm CA filter. 1/67

Tar (4 mg) and nicotine (0.2 mg) reduced by increase in filter length (20 to 25 mm) and tipping paper (24 to 30 mm). 12/67

Tar (2 mg) decreased by addition of expanded tobacco (6%) - Tobacco weight lower. 10/70

Filter length (25 to 27 mm) and tipping paper length (30 to 31 mm) increased - No change in smoke deliveries. 1/73

New silver package - High menthol in smoke, filler, and filter. 8/74

Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery. 11/75

Cigarette length increased corresponding to 0.4 mm increase in filter length. 11/77

Discontinued.

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